THE

WESTERN JOURNAL

OF

MEDICINE AND SURGERY.

MAY, 1843.

ART. I.—*Medical Topography of Central Arkansas; being Observations on the Locality, Climate, and Diseases of the City of Little Rock and vicinity, in the year* 1840. By W. J. GOULDING, M. D., of Little Rock.

The relative importance of Medical Topography to the advancement of our science is now highly appreciated. Many elaborate papers of this kind annually appear in our journals; and we are led to value these successive additions to our medical literature the more from the conviction that, if ever we have a digest worthy to serve as a guide to the practice of medicine in the Southern States, its best materials will be sought in the accumulated contributions of local

medical history. Physicians, in innumerable dissertations on our science, have applied to all regions of the earth some aphorisms of Hippocrates applicable only to Greece and a few adjacent countries; this error is now known, and the most accurate observation of Nature in a given climate is found requisite to an enlightened and efficient practice in that climate. Nor is the study of all the physical circumstances of a given district which may affect the health of its inhabitants, alone required; but the peculiarities which the same disease at different times assumes, are especially to be noted; and perhaps no country, from its great extent and varied natural features, calls more imperiously for the careful observation of these facts that the United States. But waiving further preliminaries, I proceed to the more immediate object of this paper.

The city of Little Rock, which represents central Arkansas, is in latitude 34° 40′, and longitude 15° 20′, about 300 miles by water from the mouth of the Arkansas river where it joins the Mississippi. Major Long, who passed it in 1820 says: "It is a village having six or eight houses and occupies a high bank of clay-slate on the south west side of the Arkansas river. Its site is elevated, and the country immediately adjoining is in a great measure exempt from the operation of those causes which produce a state of the atmosphere unfavorable to health." It is in fact the first eligible site for a town that occurs in ascending this river; being near the centre, and the capital of a large and growing state, its future destiny can hardly be mistaken. Besides a United States' Arsenal, it has already many fine public and private buildings. Population, 2,400.

The face of the country of central Arkansas, though much diversified, may be classed under three varieties; first, *alluvial* or river bottom; second, *upland* or hilly; third, *prairie.*

The first variety is chiefly met in descending the river; the soil is of the richest kind; it is the most thickly settled but the least healthy. It is here that the forest is seen in its greatest magnificence, where the cypress, oak and cotton-wood vie in

power, lending their support to enormous osier and grape-vines which delight

> "To weave their gorgeous tracery far above;
> With the light melting through their high arcades,
> As through a pillared cloister."

But the want of good water, and the liability of this portion to the annual Nile-like floods of the Arkansas river, weigh against its great natural fertility. Yet the bottom lands of central Arkansas may fairly be set down as excellent of their kind; the banks rarely descend as they recede from the river; corn and cotton are the staple productions.

The second, or upland variety, in the face of the country, is by far the most extensive; it is always rolling, often hilly, with but little undergrowth save luxuriant grasses and flowering herbage; having forest chiefly of oak interspersed with hickory, its whole aspect, so open, park-like, and beautiful, presents a striking contrast to that of the first variety. This second variety constitutes by far the most salubrious district; good springs of water are met with, but are not common; corn and the small grains are grown advantageously, but cotton becomes an uncertain crop; most of the soil is tillable, much of it decidedly good.

The third variety, or prairie, is the least extensive, and is found at a distance east of Little-Rock, between the Arkansas and White rivers; several small praries, and a large portion of "big prairie" so called, are found in this direction; usually of the better kind of dry or upland prairie, they easily admit of cultivation although as yet but little cultivated; their greatest drawback is the want of good water.

From the foregoing it will be perceived that the greatest diversity in the face of the country obtains in central Arkansas; the sea-like prairie and the beetling cliff—the mountain torrent and the sluggish bayou—the sleeping lake and the mighty river, will not unfrequently by quick succession agreeably surprise the traveller or command the fullest admiration of the lover of nature. This marked diversity joined to a genial climate renders it a locality of peculiar interest in re-

gard to its natural productions; the muscadine and other wild grapes, as also the date-plum (*dyospyros pubescens* of Pursh), and the paw-paw (*porcelia triloba*), are found in perfection here. The cane (*miegia*) extends itself high up this river, and the beautiful china-tree is easily grown and is said to have become naturalised here; among the forest trees are found the false orange (*maclura aurantica*), evergreen holly (*ilex opaca*), tupello gum (*liquidambra styraciflua*), and the coffee-bean tree. Among medicinal plants, the *palma christi*, *spigelia*, two species *gillenia* and two *baptisia*, also the more valuable of the natural families *labratae* and *solanae* are here found in the greatest profusion; the tarantula, the scorpion, and centipede, (the last of enormous size) among reptiles; and beautiful specimens of the amethyst and topaz among minerals. Anthracite coal of an excellent quality is at this time an article of export from central Arkansas, and the locality of "Hot-Springs" in this State will yield to none in the world perhaps in geological interest.

I come now to speak more particularly of the climate; in this respect we have a medium between that of New Orleans on the one hand and that of St. Louis on the other; it may also be observed that distance west of the Mississippi, and the more elevated character of the adjacent country renders the air far less humid and the prevailing winds in general more agreeable than in the immediate valley of that river. Ordinarily the peach is in *full* flower quite early in March, and the forest in *full* leaf by the first of April. But as a just estimate of climate can be drawn only from daily and accurate meteorological observations, I will here insert the following table, being an abstract of much more detailed observations for the year 1840, following the same with such other remarks as the farther elucidation of the subject may seem to demand.

ABSTRACT FOR THE YEAR 1840.

Months.	Thermometer. Highest Degree.	Lowest Degree.	Mean Temperature.	Hottest day.	Coldest day.	Winds. N.	N.W.	N. E.	E.	S. E.	S.	S.W.	W.	Prevailing.	Weather. fair.	cl'dy.	rain.	snow.	Prevailing
January,	63	19	40	6	1	3	5	5	3	4	2	2	7	West,	13	18	7	1	Cloudy.
February,	78	20	50	29	1	3	3	3	3	3	7	5	2	South,	18	11	5	0	Fair.
March,	81	36	57	18	20	1	4	2	2	1	3	8	10	West,	18	13	6	0	Fair.
April,	84	47	64	24	11	2	4	3	5	2	8	6	3	South,	14	16	9	0	Cloudy
May,	87	53	70	30	9	2	1	3	2	3	4	4	8	West,	26	5	4	0	Fair.
June,	93	58	78	29	7	2	1	3	2	3	7	6	8	West,	24	6	5	0	Fair.
July,	92	64	79	17	4	3	2	6	10	2	1	4	3	East,	22	9	9	0	Fair.
August,	96	65	79	3	14	2	3	11	3	3	1	5	3	N. East,	24	7	7	0	Fair.
September,	88	51	71	7	19	2	4	10	3	5	1	4	1	N. East,	20	10	6	0	Fair.
October,	86	38	65	9	26	5	4	5	3	3	4	5	2	N. N. E.	21	10	8	0	Fair.
November,	73	22	50	7	25	4	3	5	2	6	2	5	4	East,	20	10	4	2	Fair.
December,	72	23	45	9	31	3	5	1	5	4	9	2	2	South,	16	15	4	2	Fair.
Annual,	62					31	39	55	48	33	52	55	53	S. W.	236	130	74	5	

It is proper here to observe that, in regard to the position of the instrument, times of noting, &c., in the tables of which the above is an abstract, the indications given on this subject in the "Regulations of the Medical Department of the United

States Army" have been strictly observed. Range for the year, seventy-seven. Coldest month, January. Hottest month, August. As it respects temperature, the past may be considered an average year in this locality, but in regard to weather it must be stated that the *amount* of *rain* and the proportion of *cloudy* to *fair* has been greater than usual. The prevailing winds also in this locality during the hot season are usually south and south-west; in this respect however the table will show a decided prevalence of east and north-east winds during the months July, August and September, 1840. This fact (which, indeed, was the subject of frequent remark at the time) is believed to have had an important agency in producing the very unusual severity and prevalence of fever, which afflicted this place and vicinity the past season, as will appear more fully in the sequel.

Diseases.—The past season as before intimated has been characterised by an unusal prevalence and severity of intermittent and bilious remittent fever. Very early in August these forms of fever assumed a grave character and became unusually prevalent, at the same time an early tendency to general prostration or, in other words, a typhoid diathesis seemed to mark the progress of the disease: emetics early, followed by mild cathartics and mucilaginous drinks, with cold effusions, blisters, and especially later in the attack, the extensive application of mustard, gained an increasing confidence as the disease progressed. It is worthy of remark here that sore-mouths, unusually protracted and obstinate in their character, often followed; nor did these follow only in cases in which mercurials entered the plan of treatment; in very many of these cases the gums would remain in their normal condition while the buccal portions of the mouth and the tongue were the seat of corroding ulcers, tumefaction and intense pain. In these cases Labarraques' liquid was found a most efficient, indeed an invaluable local application. In general the lancet, as also protracted purging, was ill borne, and it soon became manifest that an object of primary importance was to husband the general strength for a sequel of pro-

tracted debility, as insidious and dangerous in its character as it was sure to follow. Indeed, when contrasted with the degree of violence attending the invasion and progress of the attack, the period of convalescence was in every case peculiarly protracted and critical. This aggravated prevalence of fever subsided early in October, since which time up to the date of this paper, the health of the locality has been comparatively good. It is not to be inferred that the disease at any time assumed that malignant type; or ran its course with that rapidity which has sometimes characterised the prevalence of epidemic fevers in still more southern and more unfavorably located towns. The interments in the city during the four months ending on the thirty-first day of October, were one hundred and five, of which number eleven were colored persons, and thirty-five were children under ten years of age. Population as before stated two thousand and four hundred. This proportion of mortality to the number of inhabitants is believed to be at least three-fold that of preceding years at the same period. When the commercial location of this town and its rapid growth during the last two years are considered, it will readily be inferred that a large proportion of the deaths were of non-resident or unacclimated persons; this was strikingly the case; indeed comparatively few of those long resident in the locality have fallen victims to the diseases of the season, with which they have suffered in common with others.

In searching for the causes of the peculiar cast and strength of the epidemic influence of this locality the past season, we are as in most cases of the kind not fully satisfied; much we think may be set down to the fact before stated in regard to the winds coming upon us during the hot season from an unusual and unfavorable quarter—and also to the fact that the great annual or June rise in the Arkansas river occurred some four weeks later in the season than is common, and the overflow in central Arkansas was unusually great. The preceding season, to wit, that of 1839, was one of good health, though characterised by uniform and highly sustained heat

and protracted drought, so much so that many wells of the town were dry and others unfitted for use; the winter following (that of '39 and '40), was marked by no peculiarities. If we except the season in question, the past history of this place will put it in an enviable rank for health among the towns of the south-west. Yellow-fever has never appeared here, nor has cholera, only as it was imported; generally speaking there are no prevailing diseases save intermittents, which are usually of a mild grade and readily yield to appropriate treatment. Pulmonary consumption can hardly be said to have an existence, at the same time complicated pleurisies (pneumonia biliosa) are not uncommon during our winters, and are the most to be dreaded of any attacks incident to that season; scarlatina occasionally makes its appearance, and instances of chronic rheumatism are not infrequent. Once in the past history of central Arkansas a disease called the "cold-plague" had a brief and limited, but for the time a very fatal existence in Conway county, fifty miles above Little Rock, rapidly carrying off a number of the inhabitants. Two cases (answering to the above disease as it has been described to me), terminating fatally within thirty-six hours, in somewhat aged subjects and of impaired constitutions, have fallen under my observation the past season; these attacks consisted of a violent congestive chill, if I may be allowed the expression, from the almost paralysing effect of which the system was unable to rally.

Next, in regard to prevalence and deletereous agency on health and life in this place, may be mentioned, diarrhœa, dysenteria, croup, cholera infantum, and dropsies. In conclusion it may be remarked that this climate is not subject to as great a variety of diseases as portions of our country farther north. Fever in its multifarious forms far outweighs all others; and it is believed that when the local causes incident to all new districts, tending to aggravate this class of diseases, shall have more fully passed away, this place will be noted for its salubrity as it now is for its beautiful and commanding location.

January 1841.

ART. II.—*Extraordinary case of Pericarditis.* By CHESTER G. BALLARD, M. D., of Greencastle, Indiana.

I have denominated the following case extraordinary from the fact that I have neither met with the like, nor in my intercourse with the profession have I had one of the kind reported to me—and after the most diligent search through many volumes of Medical Journals, and all the standard works in my possession, I am unable to find an analagous case.

About three weeks since I was called in the night to visit an orphan male child between five and six years old, at the residence of its grand-mother in this place, in consultation with the attending physican, who informed me that the child had been under his treatment for several days with the following symptoms: slight fever, coated tongue, tumid abdomen, slight cough, restlessness, and constant picking of the nose. Treatment—vermifuge medicines, calomel and Dover's powder. Under this medication the febrile symptoms had been to some extent relieved, but no worms dislodged.

The cause of alarm at this hour, was sudden dyspnœa and restlessness, which however had much abated before my arrival. I found the mucous membrane of the nose, mouth, and fauces in a high state of irritation—pulse feeble and quick, but not intermitting—abdomen very tense, without the least apparent tenderness—fluctuation distinct. I learned from the family that the child had been fretful, peevish, and sickly, since it was seven or eight months old, about which time it lost its mother. I also understood that it had been subject to severe spells of crying, at the same time manifesting the strongest indications of pain, which, when its judgment was sufficiently matured, it always located by putting its hand upon the sternum. Walking up hill, or the playful exercises of childhood always produced difficulty of breathing—appetite had been uniformly good, and bowels regular; but notwithstanding its uniform appetite and the healthy function of

all the chylopoietic viscera, marasmus had set its signet upon him, and marked him for a victim.

I gave it as my decided conviction there was serous effusion in both the great cavities, and that worms had nothing to do in the matter—and that death was inevitable. I advised the gentleman in attendance to apply an epispastic from the upper part of the sternum to the umbilicus—to give small portions of jalap and cream of tartar at proper intervals until catharsis was established, and support the strength of his patient with appropriate means if occasion should require.

Following day—blister looked fine—several dark, bilious dejections from the bowels—breathing short but easy as common—mucous irritation almost disappeared—copious secretion from the kidneys, which were torpid the night before—abdominal tension much less. After which I saw him no more until I was requested by the physician to make a post-mortem examination, which was done sixteen hours after death.

Autopsy.—When separating the cartilages of the ribs in removing the sternum, there was a discharge of about half a pint of pale yellow serum containing no flocculi—this I was prepared to see—sternum being removed, the pericardium presented itself to view, filling almost the entire cavity of the thorax, which I supposed to contain a similar fluid, but on making an incision I was surprised to find it filled with healthy looking pus, and to the enormous amount at least of two quarts. The lamina of the sac were greatly thickened, the outer one seemed completely united with the mediastinum—its attachment to the cordiform tendon of the diaphragm much extended—the lining membrane rather more pallid than natural—no lesion in its structure. The heart was natural in color, its ventricles and valves all sound, but it was soft; the softening however appeared to be nothing more than a tendency to general decay—all the muscles were flaccid. Lungs collapsed and contracted until neither lobe would measure more than two and a half inches from base to apex, and in external appearance resembling glandular bodies, and posses-

sing, when submitted to the test of the senses, about the same density as that of the spleen—they exhibited no marks of past or present inflammation, and could not, I should presume, by the greatest expansion of which they were capable, have contained more than three or at most four cubic inches of atmospheric air—the pleura on both sides possessed all the firmness and brilliancy of that of the most healthy subject. The cause of the serum in the chest was probably deficiency of absorption—as also that of the abdomen, which also contained upwards of a pint of colourless serum. The abdominal viscera were all sound.

The great singularity of this case seems to consist in three particulars, viz: the length of time the disease had existed; the serous membrane of the pericardium putting on suppurative action so perfectly; and the enormous quantity of pus secreted. That it was insidious in its character should not be thought an anomaly, for that is one of its striking characteristics. Laennec acknowledges that it is as frequently mistaken as recognised, even by himself. With regard to the slow progress of the disease in the above case, we think there is no reasonable doubt, when we consider the sickly character of the child from the time it was seven or eight months old up to the day of its death; constantly complaining of pain in the thorax, and shortness of breath following the least active exertion. An argument might be drawn with great force to sustain this position from the condition of the lungs. But the serous membrane producing such perfect purulent secretion and to such extent, is what we think the most singular feature in the case. Dewees remarks that the pericardium acts from laws of its own; this case seems to favor that opinion. The cough mentioned at our first visit, was by no means a concomitant of the chronic disease. The only acute disease with which it was ever afflicted, that of mucous irritation, was always accompanied with a slight cough.

December, 1842.

ART. III.—*Miscellaneous cases and observations.* Read before the Vincennes Medical Society, November, 1842. By DR. J. S. SAWYER, of Vincennes, Indiana.

On the 9th May, 1841, Mrs. E. was delivered of a delicate female child exhibiting the natural appearances, except a large ventral hernia. This tumour, about two and a half inches in diameter, at its base, occupied the lower and anterior portion of the symphisis pubis. The surface presented a fiery red appearance, and was covered with small elevations, resembling fungous excrescences, at the side of each of which was a small puncture. The whole tumour discharged an irritating, ichorous fluid. Its size varied with the different degrees of distention of the bowels. Fearing either ulceration or gangrene, I directed the most soothing applications, and the most scrupulous care to prevent chafing.

This being, to me at least, a novel case, I requested my friend Dr. Posey to see it, who agreed with me that nothing could be done at that time for permanent relief. As I had apprehended, the surface soon began to ulcerate, and in a short time so large an opening was formed, that a great portion of the bladder was protruded through it. It now appeared evident that the abdominal parietes were entirely wanting, and that the hernial sac itself was exposed. As to the precise nature of the connexion of the tumour at its circumference, with the integuments of the abdomen, I cannot hazard an opinion. The child during the month contracted the infection of pertusis, which, together with the irritation of the hernia, soon carried it off. A post-mortem examination would have been desirable, and might have shown the upper portion of the pubes to have been wanting. But owing to the delicate health of the mother it was not proposed.

The complaints arising from inflammation and irritation of the spinal cord, have of late attracted much attention and been the subject of many dissertations. Like most new things

this discovery has no doubt been overrated, and spinal irritation has been made to account for the production of ailments not easily explained *otherwise*—just as we denominate many complaints and symptoms nervous, which we do not understand. Believing however, that spinal irritation does not receive undue attention in this region, I shall relate a case or two which may serve to show some of the anomalous symptoms that may be produced by it. In the fall of 1840, I was called upon by a lady of my acquaintance aged about thirty-five and requested to prescribe for her. She stated that for several days she had been unable to speak above her breath, felt general debility, and particularly, a weakness of the upper extremities. She had had several attacks of this kind before, (which, like the present, had appeared without any apparent cause), for which digitalis had been prescribed and taken without much benefit. The patient's constitution had been much shattered, and she had had some years before, an attack of hæmoptysis. I prescribed an expectorant mixture of syrup of squills, antimonial wine, and elixir paregoric, which affording no relief, the patient in a short time called again. It now occurred to me that the aphonia might depend upon spinal irritation and a consequent partial paralysis of the nerves supplying the organs of voice. Finding, upon examination, great tenderness of the lower cervical and one or two of the upper dorsal vertebræ, I prescribed a blister, which had scarcely drawn before complete relief was obtained. Nearly two years have since elapsed, but there has been no return of the complaint. Sometime afterwards, I attended a lady who was subject to attacks of aphonia and weakness of the upper extremities, upon making any unusual muscular exertion. The same condition of the spine was found to exist, and the same treatment was successful as in the other case. It may be well to state that this lady has since had an attack of hæmoptysis.

It is well-known, that the phenomena of voice depend upon the internal laryngeal, and the recurrent nerves, which are

branches of the par vagum, and are distributed, the former to the epiglottis and muscles moving the cartilages, and the latter to the larynx and trachea. The spinal accessory, which with the glosso-pharyngeal, and par vagum makes up the eighth pair, takes its origin from twigs of the fourth, fifth, sixth, and seventh cervical nerves, and after uniting with the other two divisions of the eighth, is finally distributed to the muscles of the shoulder. This connexion seems to explain the production of aphonia, pain in the shoulder, and weakness of the upper extremities, from an irritation of the spine at the origin of the spinal accessory nerve.

Inflammation and congestion of the brain, prevailed to an alarming extent in some parts of the country, during the last winter. A striking feature of this epidemic, was the rapidity of its progress. I shall attempt to give some account of these complaints as they occurred within the circle of my practice, not so much with a view of saying anything new, as with the hope of stimulating other members to communicate the result of their observations and reflections. In the early part of February last, I was called to visit a boy aged about six years, the son of a gentleman who had already lost another child, after a few hours illness. He complained of great soreness of the limbs and the whole surface of the body. Lying in bed produced great uneasiness and pain, and when I attempted to examine his pulse he would cry out with anguish. The surface was most of the time cool, though in some part of the day, there was slight reaction. The skin was covered with small, smooth, dark-red points, not much larger than a pin's head. This was a case which would no doubt have been called at one time, cold-plague; and Saalmon in his account of epidemic *inflammation* of the *brain*, says, that it sometimes made its appearance with imperfect reaction, and great pain and soreness of the limbs. Considering a strong tendency to *congestion* of the brain manifested in this case, I prescribed the semicupium, blisters to the extremities, and a large dose of calomel. I did not see the patient again, but understood that the calomel did not operate for twenty-four

hours, when a large quantity of black bilious matter was discharged, with considerable amendment of the symptoms. This case might have recovered under a vigorous course of counter-irritation, and evacuation from the liver, but having no further treatment, it went on to a fatal termination. Before I left the house, the infant in the cradle was observed to be more fretful than usual. A simple prescription was made, hoping that it was not seriously indisposed, but in about thirty-six hours it expired.

In a few days I was requested to visit a boy about four years old, in the same neighborhood. I arrived about two o'clock, P. M. I was informed that he had not appeared indisposed until the morning of the same day, when he complained of his head, and growing rapidly worse, the family sent for aid. When I arrived the patient was nearly insensible. The surface was rather cool, and covered with small smooth points of a purple color—pulse small and weak. The eyes had a vacant appearance, and no impression was made upon the pupil by the approach of a candle. Considering the rapid progress of the case, and the deeply congested state of the brain, I could not give the parents any encouragement. The patient however was immersed in a warm bath, which produced great prostration. Blisters and sinapisms were then applied to the extremities and stomach, a large dose of calomel was, with much difficulty, administered, and another directed to be given in two hours if practicable. The progress of the disease was not at all arrested, and, in twenty-six hours from the time when he first complained, the patient was a corpse. Just before I left, the youngest child, probably ten months old, was observed to be fretful; but I was not asked to prescribe, and did not examine it. In six hours it died. I do not know what were the symptoms, but suppose they were the same as in the other case. The case here related I consider one of congestion of the brain; a disease which, so far as I know, is of much more rapid progress than inflammation, properly so called, of that organ.

I shall briefly relate a case of inflammation of the brain

which came under my care in the latter part of March. The patient was a little girl about five years old. She had been complaining some days before I was called, but was not considered dangerous until Thursday, when she became so much deranged as to alarm the family and induce them to send for aid. I arrived about two o'clock, P. M. The little patient could now seldom be made to answer a question, and when she did, the answer was altogether incoherent. The face was flushed, the eyes red and suffused, the pupil dilated. She would frequently rise in bed as if much affrighted, muttering inarticulately. The hands were tremulous, and the whole features indicated great nervous excitement. Vomiting, one of the usual symptoms in this complaint, was present in this case. About a dozen large worms had been thrown from the stomach. The pulse was weak and frequent. In view of the rapid progress of the case, the difficulty of administering medicine, and of the fact that the second stage of the disease was already present, I considered this case as hopeless. I however administered a large portion of calomel and rhubarb, and left several others to be given two hours apart if possible; and a strong preparation of pink and senna was directed to be given in as large doses and as often as practicable. Blisters were applied to the temples and extremities. In the evening the medicine had not operated—directed it to be continued through the night when practicable. The vomiting continued at intervals all night, and the medicine, notwithstanding the use of injections, did not operate until eleven o'clock next day, when large dark evacuations were had, together with twenty-six large worms in one knot. By this time, however, the patient was rapidly sinking, and expired about one o'clock, less than twenty-four hours from the time when I first saw her.

I propose to close these imperfect remarks with a few reflections. Inflammation and congestion of the brain, though they may arise from the same cause, yet obviously do not consist in the same condition of the brain. In other words, like causes do not produce like effects, in all systems

and at different times. The most common cause of both in this climate, is doubtless cold. This cause may, in one individual, produce inflammation in the substance of the brain or its membranes, ending, unless arrested by timely depletion, in gangrene or effusion; while in another, so great a shock is given to the nervous system that no re-action takes place, and the powers of life seem at once to succumb. Whether in congestion of the brain, the condition of that organ is essentially inflammatory, I shall not presume to decide. I believe not. In general we understand a congestion of any part to consist in an over-distention of the vessels of that part, and a sluggish motion of the contained fluid, *without* inflammation. There is no doubt that the direct effect of cold is to weaken the action of the heart. This principle, so easy of demonstration if necessity required and time permitted it, will be taken for granted, in attempting an explanation of the proximate cause of congestion of the brain. The heart being weakened in its action, the blood must necessarily accumulate in the right side of the heart and in the large veins leading to it, for the reason that the organ has not power to free itself from the burden, by filling the arteries. The blood being, consequently, imperfectly arterialized, does not exercise its natural amount of stimulus upon the heart, which tends indirectly still further to weaken its action. This state of congestion occurs to a great or less extent in the cold stage of every paroxysm of fever, but in these cases, *reaction* coming on, restores the balance of the circulation. The causes which tend to render the amount of congestion relatively greater in one organ than another, may be various; as constitutional or accidental weakness of the part, predisposition, &c. In the operation of any cause weakening, in a great degree, the action of the heart and producing consequent venous congestion, the *brain*, returning as it does so large a quantity of blood to the right aurich, *must* to a very great extent be implicated in that congestion. But when cold produces such inroads upon the nervous system, as to prostrate at once the vital energies, so that reaction cannot take place, it is but

natural that the *brain*, which is the *centre* of that system, should be the principal seat of congestion. This tendency, so natural in itself, may be increased by any source of irritation in other parts, the effects of which are most naturally transmitted by sympathy of parts to the brain. I am persuaded that in the epidemic of last winter, this source of irritation was the presence of worms. I am convinced from observation and reflection, that this cause, by producing an undue excitement in the brain, hastened the progress of the disease and rendered the fatal result more certain. Indeed, there is reason to suspect that in some cases of the kind, worms are the main cause, and the application of cold, merely a concomitant. So well am I persuaded of the mischief they produce in many affections of the brain, that I consider their expulsion as one of the first indications, in the early stage of the complaint.

It may be useful to attempt a diagnosis between inflammation and congestion of the brain. *Inflammation* is known by the general heat of the skin, the flushed countenance, the red eye, pain, generally acute in some part of the head, vomiting, early delirium, and contracted pupil. The pulse is said to be sometimes full, but generally hard and small. In *congestion*, the reaction is feeble, and in the worst cases there is none; consequently, there is little or no external heat. The face, instead of being flushed, is *pale*, or has a *darker* hue than natural. Instead of the delirium and nervous agitation, there is languor, coma, soon followed by insensibility. The pulse is weak, soft, and compressible. The period of insensibility occurs much sooner than in inflammation. There is reason to believe that the immediate cause of death in congestion, is not, as in inflammation, the process of effusion or gangrene, but the compression of the brain from over distention of its vessels or from their actual rupture.

With regard to the treatment of these complaints few words will suffice. Where they occur in a violent form, as in the epidemic of last winter, nothing less than the most vigorous course of treatment in the very onset of the disease,

can be of any avail. The misfortune is that, not apprehending danger, the friends do not call a physician until the disease has made much progress; when, even if he could always have the necessary means at hand, the stage for active depletion is past. Where however the patient can be seen in time, there can be no doubt of the absolute necessity of the abstraction of blood, though in the cases of children it must be done cautiously, as it is admitted that they do not bear blood-letting with equal impunity as adults. In inflammation, bleeding from the arm and cupping seem to answer the indication; but in congestion I think bleeding from the arm contra-indicated. Cupping the temples and nape of the neck, and opening the jugular vein appear to afford the only rational means of relief, so far as blood-letting is concerned. The next step is to remove all causes of irritation, and of these in cases of children the most important is worms. Ten grains of calomel should be given to a child five years old, in bad cases, repeated every three hours until it operates. A strong preparation of pink and senna should follow the first portion of calomel, and be repeated every hour in as large doses as the patient will swallow, until free evacuations have been procured from the whole. There should be no waiting or hesitating in this course, for when worms are present proving a source of irritation, unless sufficient medicine be administered *before stupor occurs*, to operate freely in a short time, the case will inevitably go on to a fatal termination. The calomel is always indicated, because, when it acts upon the liver producing black discharges, it derives powerfully from the head, and when worms are present it is *doubly* required. Even when no worms are expelled, the calomel, pink and senna are beneficial, because they seem to quiet them, and, operating briskly, these medicines produce the timely removal of other offending matter from the stomach and bowels. We dare not wait for the slow operation of these medicines given in the usual way, though they act more surely. A few hours brings stupor, when it is very difficult to give medicine in sufficient doses. Besides, the free operation of medicine after that time

seems to hasten the fatal result. Blisters should be applied at an earlier period than is usual in affections of the head. In all doubtful cases, if blisters are used, it should be done immediately upon the appearance of a disposition to coma. If delayed, they will frequently not act at all. In inflammation of the brain which runs its usual course, it is better to defer their application until the violence of the disease is somewhat abated.

ART. IV.—*Cæsarean Operation on a Dwarf.* By CYRUS FALCONER, M. D., of Hamilton, Butler county, Ohio.

Perfect success is not always the test of merit or skill; but it is sometimes the chief motive in reporting cases for the public eye. I am not positively sure that some influence of this kind has not prevented me from offering at an earlier date a report of the following case, which has certainly some peculiar and striking features, however barren of brilliancy in the result.

On the 6th of July, 1840, I was called to visit Miss ——— ———, of Ross township, in the south-western part of this county (Butler), in labor with first child. The physician in attendance was Dr. Praether, an intelligent practitioner of Venice, near which village the patient resided. She had been in labor since the previous midnight; I arrived about 2½ P. M.

I was not a little surprised to find the patient a *dwarf*, just *three feet six inches in height*, with a form very illy proportioned. Her head was perhaps of normal size, and her trunk not greatly inferior in *breadth* to the ordinary standard, but longitudinally reaching little over its proportion of her diminutive stature. The left foot of the fœtus was presenting at the os externum, and Dr. P. informed me he had felt the toes of its fellow; but had been unable to introduce his hand so as to grasp the foot

and bring it down. I proceeded to examine her; and carrying the finger to the superior strait, I immediately discovered a mal-conformation of the pelvis. The sacrum projected towards the pubis so as to give the superior strait the character of a *fissure;* the antero-posterior diameter being certainly not over one inch and three-fourths. The leg of the presenting foot occupied the full breadth of the fissure, affording an evidence but too conclusive that nature was not competent to the delivery. The os uteri was well dilated, and the pains incessant and severe. Carrying my hand over the abdomen I found the uterus occupying a diagonal position; the fundus extending high into the right hypochondriac region.

Her mother assured us that the mal-formation was congenital, and that she had observed the pelvic obliquity soon after birth: but from a history of the early childhood of the patient we were satisfied it was the result of *rachitis.*

What was to be done? The strength of our patient was flagging in an unavailing travail. Her delivery *per vias naturales,* was evidently impossible. Shall we sacrifice the fœtus in an attempt to save the mother? *Can* we, after awaiting its death, remove it piecemeal? These questions were rapidly and anxiously revolved in our minds. Had the head presented, its reduction and the use of the crotchet would of course have presented themselves, though had that been the case there was not room, I apprehend, for the passage of the base of the cranium. Under the circumstances, we were soon brought to the conclusion that the only hope for either child or mother was in the *Cæsarean section.* This *might* save both, without it the loss of both was inevitable; for we had not sufficient confidence in the division of the pubis to induce us to canvass its merits.

Quietly withdrawing the mother of the patient, and one of her friends, we stated to them frankly the situation of the case, and the alternatives. They were less surprised than I had anticipated, the dwarfish stature and disproportions of the girl having prepared them for something of the kind. We next communicated our views to the patient herself—she ex-

hibited but slight emotion, and promptly agreed to the operation.

We then proposed sending to Hamilton—eight miles—for additional counsel: but to this the patient strongly objected, insisting she could not endure the delay, and imploring us to proceed at once to the operation. Her mother joined in the request, and indeed we were satisfied that every hours delay lessened the prospect of a favorable result. The most propitious time, according to all writers on this subject, I believe, had already long since passed.

The operation resolved upon, we set about preparing for it. Ligatures, adhesive strips, lint, compresses, and a broad bandage were arranged ready for use. The instrument selected was the common scalpel.

Placing the patient upon her back on the bed which she was finally to occupy, with the lower extremities partially flexed, and having the walls of the abdomen compressed by assistants, so as to fix the uterus and prevent the escape of the omentum or intestines, I proceeded to make the first incision. In order to make myself understood I will repeat that the fundus of the uterus extended high into the right hypochondrium, overlapping, and to a considerable extent, dislodging the liver from its position. It was necessary to make the incision somewhat oblique, beginning at the upper part, near the right margin of the *linea alba*, and crossing towards its centre in the descent towards the pubis. The usual direction is to commence below the umbilicus: but in this case the shortness of the abdomen made it imperative to begin considerably higher up, in order to get an opening large enough to extract the fœtus. This case seemed to me a wonderful illustration of the capacity of nature to adapt herself to circumstances, however straitened. The liver and stomach appeared to be crowded entirely out of their proper location, pressing of course, in turn, upon the diaphragm and other viscera, and yet the functions of animal life had been but little disturbed. With the first sweep of the knife, I divided the abdominal integuments to within an inch or an

inch and a half of the pubis, exposing the aponeurotic expansion which forms the linea alba, the whole distance: this was then carefully divided, and the peritoneum presented itself. Making a small orifice in this latter membrane at the upper extremity of the incision, I inserted a couple of fingers and slightly elevating them divided it; the fingers acting as a director, and protecting the parts beneath. At this part of the operation, much difficulty was experienced in preventing the escape of the intestines. The uterus was opened, observing the same caution as with the peritoneum, and the fœtus was exposed, its back presenting to the incision. Although I began my incision considerably above the umbilicus, such was the relative size of the child that I found it impracticable to extract it, until I had extended the opening in each direction; approaching nearly to the cartilage of the lower true rib above, and the pubis below. During my efforts to accomplish the delivery, considerable extravasation took place. The relative size of child and mother can only be conceived by the reader, when he remembers the height of the mother—3½ feet—and learns that the child was about the ordinary size, weighing, by conjecture, from seven to eight pounds.

I at length succeeded, by grasping the thighs in elevating the breech, and delivered the child, as in a breech presentation; it soon cried lustily, and was separated from the cord. The uterus now contracted powerfully, the placenta was expelled, the extravasated blood removed as much as possible, and we then proceeded to dress the wound.

Four or five points of the interrupted suture were employed —long adhesive strips were applied between the sutures, leaving a space at the lower portion, for the escape of any discharge that might accumulate. A broad compress was next applied, and the whole covered with a broad firm bandage tolerably tight.

During the operation, the patient made very little complaint; she now said she felt very comfortable, and expressed much gratification at being relieved by an amount of suffer-

ing, so much less than she had apprehended. An anodyne was administered, and finding her at the end of a couple of hours still comfortable and inclined to rest, I left her, and rode home, solacing myself with the pleasing hope of a favorable result. Ere morning, however, inflammation began to be developed. On visiting her next day, I found the tongue white, the pulse quick and frequent, the abdomen swelled, tympanitic, and tender, great thirst, with all the evidences of a high degree of inflammation. Dr. Praether residing near her, saw her frequently; but it is not necessary to detail the treatment, which did not differ from that usually pursued in inflammation of the abdominal viscera. She died on the eighth.

The child did well, and is now a vigorous healthy and well formed little girl.

An additional link in the chain of sympathy excited in my bosom for the luckless subject of this notice, was the fact that she was the victim of a human fiend, *in the shape of her own uncle!*

A word as to the proper time of operating and I have done. Cæsarian section must necessarily be an exceedingly rare operation in any country, and more especially in the sparse population and well-formed pelves of *our* country. This infrequency, with the want of observation and experience which flows from it, will ever tend to produce hesitancy and indecision in the minds of the medical attendant, and will probably very often delay the operation until the most elegible time has gone by. The fear of censure will doubtless sometimes throw its weight into the same scale; for it is unfortunately true, that there are many in our profession who will find fault with the practice of a rival brother, whenever it is practicable to do so. In *this* case it has been said we were too precipitate, and should have had additional counsel. But in fact the delay already had, was very possibly a cause of the unfortunate result to the mother. The unfavorable termination of nearly all the earlier cases of Cæsarian operation in Eng-

land, is attributed chiefly to the late period of labor when the operation was resorted to.*

The continental writers, amongst them *Graefe* and *Baudelocque*, unanimously assure us that the proper time for the operation is before the waters have been evacuated, and just so soon as the os uteri is sufficiently dilated to permit their free discharge. In this opinion Dewees concurs; and no doubt such is the proper course where election as to time is within the control of the attendant. *Sabatier* says, "There ought not to be too much delay, lest the patient's strength be exhausted, and the violent efforts of labor should bring on an inflammatory state of the parietes of the uterus."

March, 1843.

ART. V.—*On the Use of Cathartics in Retention of the Placenta.* By Dr. THOMAS H. TODD, of Lincoln county, Tennessee.

Although much has been said and written on the subject of retained placenta, yet we have much to learn about it, as indeed about many things in every other branch of medicine. It is not my design to write an elaborate dissertation upon this topic. My aim, in the remarks that I shall make, will be, to direct the minds of practitioners to a certain class of remedies which have heretofore, so far as my information extends, been overlooked, or entirely neglected by the practical accoucheur. I must therefore refer the reader to the standard works upon obstetrics, and to the numerous essays contained in the medical journals, for a full account of the subject, and the general management of such cases; while I shall confine my remarks to the therapeutic agency of *cathartic medicines*, as a means of expelling the secundines under certain circumstances. Why cathartics have so long been overlooked

* Vide Hull's letter, Denman, *et al.*

and neglected by the profession, is really matter of much surprise to me; for we cannot peruse the writings of any one upon this subject, without being able to glean abundant evidence, that goes conclusively to establish the efficacy of this class of medicines, in rousing up the dormant energies of the uterus. And they will do this, independent of any particular irritation or excitement which they may produce upon the rectum. The older writers on midwifery discovered that there was an intimate sympathy existing between the rectum and uterus, and that any undue excitement in the former, was readily communicated to the latter organ: hence, they early learned the efficacy of stimulating injections in cases where they desired uterine contraction. To the correctness of this fact all subsequent writers have testified. But why this discovery should forestall all further research and inquiry, respecting the sympathy that might exist between the uterus and the bowels, instead of leading to it, is a problem that I shall leave for others to solve. In the meantime, however, I shall endeavor to prove that this sympathy is not confined to the rectum, but extends to the whole alimentary canal.

All writers in treating of the diseases of the pregnant female are unanimous in cautioning us in the use of cathartics, lest, say they, the use of this class of remedies should excite the uterus, and thereby produce abortion. Now it is well known that *drastic cathartics* when carried to excess, are prone to excite the rectum, and to produce tenesmus; but that all purgative medicines, when not carried too far, will produce this effect, no one will hazard his reputation by asserting. The late Dr. Dewees says: "The pregnant woman does not bear purging so well as one who is not so, and if this operation be carried very far, there is a risk of producing abortion." In speaking further upon this subject he says: "We suggest a caution in the choice of purgative medicines; all such as act with great force upon the bowels should be avoided; as all such as are classed among the drastic purgatives, as scammony, gamboge, colocynth, aloes, &c.; because each of these produces, during its operation, great irritation

and very frequently excites tenesmus. It is this *peculiar irritation* which renders any cathartic unsafe which may produce it; no matter to which class of cathartics it may belong; for if castor oil, magnesia, or any other mild cathartic were to produce this effect, it would be equally improper, as any of the drugs proscribed above."

The foregoing quotation serves to show that any purgative will sometimes produce uterine contraction: but Dewees thinks it will only do so, by first producing a *peculiar irritation* upon the rectum. He has not, however, attempted to prove that castor-oil, magnesia, or any other mild cathartic, ever does produce this peculiar irritation upon the rectum, when used in moderation. There is no one who appreciates the opinions of eminent men, and those in high places, more than the writer does; but before we admit them as maxims in science, we ought at least to examine the premises upon which they are founded. That uterine contraction, when there is a predisposition in this organ, frequently follows, or accompanies the action of the bowels produced by any mild purgative, is manifest to all who have been in the habit of observing their effects upon the parturient female. I see nothing connected with the uterus, and its sympathies, but what goes to corroborate this fact. When the uterus is predisposed to contract, as it always is during the retention of the afterbirth, we see this action excited by the slightest causes, as gentle traction upon the cord, friction over the abdomen, the application of a cold or wet hand, &c. After observing the effects produced by such slight causes, why should we be so incredulous as not to believe that an action upon the bowels, sufficient to cause them to throw off their contents, could not make an impression upon so excitable an organ as the uterus is at such times, independent of producing any particular irritation, or tenesmus about the rectum. Denman, in speaking of the causes of abortion, says: "The sympathetic causes of the action of the uterus may arise from the disturbance of any part, with which the uterus is connected, or disposed to consent, as is the case with *all the contents* of the

abdomen." Again he says; "Pain in the stomach, or bowels, or any part contiguous to the uterus, or with which it is prone to consent, may disturb it; and if extremely violent, or of long continuance, may produce the same effect." And again he continues: "Such medicines as exert a violent action on the stomach or bowels, will, upon the principle formerly mentioned, frequently excite abortion; and very often are taken designedly for that purpose."

In the American Journal of the Medical Sciences (vol. 26, no. for May, 1840), Dr. Edward Warren, of Boston, has written a valuable paper on retention of the placenta. His aim is to prove, by correct data, that there is less danger in delay, in such cases, than in the violent means generally resorted to, for the speedy removal of the secundines. Among the cases cited in this essay, are the two following, taken from a report of Dr. Lee's: "In the seventeenth case, the woman was delivered of a child at the sixth and a half month. The cord had been broken off by the midwife, and the parts were so much contracted that the hand could not be introduced without too much force. The following morning a brisk cathartic was given, and in the evening the placenta came away whole, without any help, and with no bad result. In the nineteenth case, the patient had been delivered of a dead child, of six and a half months, twenty-four hours before Dr. Lee saw her. An attempt to withdraw the placenta failed. The next morning a cathartic was given, which excited vomiting and purging, and during its operation the placenta came away in a yellow indurated state—no bad symptom followed." This case is directly in point. In case seventeenth, a brisk cathartic was given in the morning, and the placenta came away in the evening; by which time, the cathartic must have been operating. I have very little doubt that the cathartic excited the uterus in this case, although the Dr. tells us it came away whole without any help.

During my residence in Starkville, Mississippi, the following cases came under my own observation:

Case 1*st.* A woman aged twenty-eight, the property of

Richard Ellett, was delivered of a living, and *first* child. The labor was tedious, and the patient much exhausted in consequence. After the child was removed, I examined the parietes of the abdomen, and found that the uterus had contracted firmly; but the tumour was high up in the right side. As there was no hemorrhage, I used friction, and pulled gently upon the cord only, for the first few hours. I then passed my fingers along the cord to ascertain if the placenta had been detached and thrown into the vagina; but it had not, as I was unable to touch any part of it. I then administered the ergot, with the view of exciting uterine contraction, and thereby relieving the patient; but in this I was disappointed, as the ergot produced no effect. After this failure I thought it best to introduce the hand and remove the after-birth, but here again I was doomed to meet another disappointment; as the soft parts had by this time contracted so much, that any attempt to introduce the hand, however slow and firm it might be, entirely failed. I now resolved to give a dose of ol. ricini, as the bowels had not been moved since the labor began, and to wait the result. In due time, however, the oil acted, and with the action of the bowels the pains returned, and threw the secundines into the vagina, where the mass was readily seized, and removed with the hand twelve hours after the birth of the child.

Case 2d. Prissa, servant of Mr. Hines, was delivered of a still-born child near the sixth or seventh month (in September, 1839). On examination twelve hours after delivery, I found that the cord had been broken off in attempts to remove the after-birth. The parts contracted so much that the hand could not be introduced; and the ergot had been given but produced no effect. As the bowels had not been moved, I advised that a dose of castor-oil should be given, and its operation waited for, as there were no unpleasant symptoms in the case. By evening the oil had operated two or three times, without producing any pain whatever. I now made an examination, but found that the placenta had not advanced any. As the patient was resting well, we resolved to leave

the case for the night to nature. At 10 o'clock next morning we gave a dose of pills containing equal parts of calomel, rheubarb and aloes. At 6 o'clock, P. M., I was sent for in great haste; the woman was in much pain and her mistress much alarmed. Soon after my arrival the pills acted upon the bowels; and with the first evacuation the placenta was expelled, forty six hours after the birth of the child.

These two cases were communicated to the editor of the American Journal of the Medical Sciences, and published in vol. ii (new series) no. 3, for July, 1841; with the following paragraph by the editor: "The well known sympathy between the rectum and uterus, explains the action of purgatives in exciting the uterus to expel its contents." This paragraph is a fit illustration of the influence that preconceived opinions and prejudice always exert over the minds of men. Now, if there is any thing, in either of the cases related above, that could lead us to conclude that there was any preternatural excitement, or tenesmus, in the rectum, it is hidden from the writer. In the first, the bowels had not been moved previously by any medicine, and oil was used on the occasion. In the second, the bowels had not been operated upon for the last twenty-four hours, and the placenta was expelled after the first evacuation.

Case 3d. I was called, in November, 1840, to see a woman the property of Richard Barry. She had been delivered twen-'y-four hours before I was called. The placenta had not been delivered, and the cord had been broken off by the midwife. The soft parts were so much contracted, and so tender to the touch, that I could not introduce the hand, without using too much violence. I gave ergot in full and repeated doses; but without producing any effect upon the uterus. As the bowels had not been opened, I gave a dose of Cook's pills. By evening they operated, producing considerable pain in the uterus; but to make sure work, I resumed the use of the ergot at this time; and in a little while the placenta was expelled. No unpleasant symptoms followed.

Case 4th. This case I did not see, on account of my own

ill-health at the time. The patient, however, was my immediate neighbor, and was treated by my brother, J. J. Todd, M. D., of Starkville, Mississippi. Mrs. F. a delicate female, and the mother of one child, miscarried in July, 1841, between the fifth and sixth months. The after-birth could not be delivered at the time, although ergot was used for that purpose. Next day the cord was broken off, in unsuccessful attempts for its removal. A purgative had been given to open the bowels, and when it acted, ergot was again used, but without producing any effect. As the case was not attended with any unfavorable symptoms, no rash means were resorted to. Early on the third day however, during the action of her bowels from a purgative dose of medicine, the placenta was expelled—without any help, as some writers would say. No bad symptom occurred afterward.

It frequently happens, that all remedies that can be brought to our aid, fail; and the accoucheur has at last to leave the case almost entirely to the efforts of nature. Friction and pressure upon the abdomen fail, ergot fails, traction upon the cord fails, the hand cannot be introduced with safety, injections do not relieve, nor will instruments answer our purpose. And yet suffering humanity calls incessantly upon us for relief. Under these circumstances we ought surely to search out, and call to our aid, each and every remedy that will tend to relieve the patient, without any detriment. Purgatives, to say the least for them, certainly exerted a salutary influence in the cases above mentioned, and that, after all other safe means had been resorted to without success.

March, 1843.

Selections from American and Foreign Journals.

Presumption of Survivorship.— By Dr. KRUGELSTEIN. The cases in which the presumption of survivorship may arise, are the following. 1. When mother and child both die during delivery. 2. When many persons perish at the same time, as under the ruins of a falling building, or in a sandpit, or by an earthquake, or by the fumes of charcoal; or when many perish at the same time by shipwreck, or in drowning, when hurled together into an abyss; destroyed in a conflagration; simultaneously poisoned; dying at the same time from wounds; from hunger or from cold.

A. On the presumption of survivorship, when the mother and child die during delivery, two cases may arise. 1. The mother dies during delivery, without bringing forth the child. Here there may be a legal question, whether the right of inheritance of the child, though living, but not born, could be transferred to a third person.

2. The mother dies during delivery, and after her death, the child is born and found dead, no one having noticed its delivery.

In the first instance, it must be previously ascertained what was the cause of the death of the mother, and what the presentation of the child. If the latter is natural, and the parts exhibit mechanical impediments to delivery, and the mother died suddenly of a nervous affection, then the presumption is in favor of the child surviving. Opposed to this, in the opinion of Jörg, is the case cited by him, of a robust and remarkably healthy peasant woman, who for several weeks previous to the full time, suffered under *eclampsia gravidarum*, and during one of these convulsions, without its being noticed by any one, brought forth a dead child, with the placenta. He remarks, however, that *eclampsia* usually attacks only healthy, muscular, and especially full-blooded women; and that

the probability of the death of the fœtus, either before or during delivery, is increased according to the length of time that the mother has been suffering under the disease.

But if the position of the child be unnatural, and especially if the funis has protruded, we may assume (and above all, if the pains have been violent) that the mother died after the child.

In the case of a child full grown, and capable of living, born after the death of the mother, the proof by examining the lungs is conclusive as to its life. But if we find on it no signs of maturity, or of intra-uterine life, the presumption is in favor of the mother surviving, and particularly if there be marks of putrefaction in the fœtus.

B. When many persons are destroyed at the same time, the first inquiry is as to the cause of death, whether by suffocation, hunger, thirst, or wounds.

In cases of suffocation, we must notice the age, condition of body, sex, and the position of the dead. In reference to age, children and young persons survive old ones. Thus, in the earthquake at Calabria, a man and his wife, with their child, were entombed by a falling house. On being dug out, the parents were found dead, and the girl alive. The nearer the individual is to the age of childhood, the less is the necessity for respiration; and hence, persons of manly age, and if not asthmatic, but of sound lungs, survive the aged.

In reference to the condition of the body, the most important point is the state of the lungs. A person with sound lungs will easily outlive another, whose lungs are indurated or suppurating, since an unfrequent, but perfect inspiration suffices to preserve for a time, the functions of the lungs, while a short and confined one does not convey sufficient air to them. In reference to the situation, we assume, that those have died last, to whose lungs the access of air was in some degree possible.

But the possibility of obtaining respirable air, depends often on very different and apparently opposite circumstances. In a conflagration which broke out in this city (————————) in 1808, two persons by the ruins falling down before the door of the cellar, were enclosed therein. One was an old man of seventy, and asthmatic, the other a very healthy person, aged about forty. The latter stood upright, and was near suffocating, in consequence of a fine smoke, which penetrated into the cellar and filled the upper half thereof; the old man, on the contrary, who had sat down on the floor, experienced nothing af this inconvenience. A man, who with his daught-

ers and his mother aged seventy, retired into a cellar, on account of fire, was suffocated with his children; while his aged mother was taken out the next day, half dead, gasping for air, but recovered and lived some years thereafter.

The nature of the masses which cause the entombment produce various effects, while the wounds depend on the masses causing them, the height from which they fall, and also the position in which the injured parts are. If large and heavy masses, ruins of walls, rocks, beams, stones, &c., fall upon the body, although the external wound may not appear severe, yet on dissection, we shall find the large blood-vessels, and the heart itself lacerated, and as the extravasated blood stains the parts, it is very difficult to decide whether the living man or his recent corpse was injured. Yet in the last case, the countenance is composed, or certainly not so distorted, as when a man has died in great terror and pain, and receiving very severe wounds.

Masses which do not cohere together, as earth, sand, rubbish, &c., press together the injured parts heavily, without generally breaking them. They also separate the extremities from the trunk, while they press on the space between, as, for example, between the arms and body. In the case of a female overwhelmed in a sand-pit, I found the body so much compressed, that it had scarcely half its natural thickness; besides this, however, there was no external injury observable. Occasionally portions of the falling masses press upon the openings of the softer parts, as in the eyelids, mouth, &c. The abdomen will be pressed together, and the contents of the intestines and bladder forced out, and sometimes even the contents of the stomach will be driven out through the mouth and nose.

Should we find such persons in various situations and positions, and in which it is evident that the deceased could not have been placed after death, as with the extremities drawn from the body, the arms upraised, or resting like the feet on the ground, or if we find under the finger nails, sand, &c., as if the sufferer had endeavored to extricate himself, or if some of these foreign substances are seen in the mouth and windpipe, it is beyond a question that such an one must have survived another, on whom these marks are not found.

It was remarked of those who were entombed by the earthquake in Calabria, that the last position at the moment of death, of males, was an exertion of all muscles, in apparent struggling; while that of the female sex exhibited marks of the wildest despair. The latter, particularly, had their hands

clasped above their heads. But when there were any children with the mother, she evidently thought only of protecting them, and with her own body endeavored to ward off the danger. The father, on the contrary, seized his child and then opposed himself to it. Thus at Polestina, a mother with her two children, one a boy of three years old and the other an infant of seven months, was found. The infant was pressed to her breast, while her body was bent over the other, so as to oppose her back to the falling ruins. She held both children firmly inclosed within her arms, and in this position was found under the ruins.

The following case was submitted for the opinion of Pyl. Two married persons had gone to bed in good health. The woman had, however, been for some months feeble, and suffered frequently from faintness and headache. In the stove was found some charred oak wood, there was also an extinguished lamp in the room, but no smoke or vapour could be discovered, although the ventilator was closed.

Both were found dead, and as was supposed, from the fumes of charcoal. The relatives raised a suit about the estate. Those of the husband contended that he must have survived, as he was of a robust constitution, and thus resisted the deleterious effects of the charcoal fumes longer than his feeble wife. Besides, his body was found warm in bed, while hers was cold. On the other hand, the friends of the wife objected, that it was not by any means certain that in all cases the weaker would yield sooner than the stronger. The body of the husband was probably covered with the bed-clothes, and thus preserved its heat, whilst it was ascertained that that of the female was naked. They relied, however, principally on the fact that the wife was only 20 years old and the husband 21, and hence she, as the younger, must have survived.

The following were the appearances externally and on dissection. Both were found in the bed, the woman with folded hands, and body stretched out upon her back, while from the mouth issued a very fetid and rather bloody froth; and from the parts of generation light red blood, which also stained the bed-clothes. The husband lay near her also stretched out, but the upper extremities were stiffer, and his fingers drawn together convulsively. A blackish froth issued from his mouth. All the depending parts of the body in each was of a black and blue color, but in neither could any mark of wound or injury be discovered. The color of putrefaction was present, but the outer skin was firm.

On the dissection of the female, the abdomen was found

greatly distended; the intestines exhibited some livid spots; the stomach was much enlarged, its upper part inflamed and the blood-vessels swollen, while the inner surface contained large black spots of the size of a dollar, on which the villous coat was abraded. The impregnated uterus was inflamed on its surface. The lungs were pale and collapsed, and in them and in the heart the blood was small in quantity, but frothy, black, and fluid. The blood-vessels of the brain were greatly distended with black, thin blood.

In the husband the appearances were similar, but more marked. There was more serum in the abdomen, and the stomach was more inflamed. The liver dark colored, contained much fluid, frothy blood. The lungs were more swollen, here and there discolored, and the vessels full of blood. The heart contained more blood than in the female, but the condition of the brain was very similar.

The opinion of Pyl is to the following effect: While all cases of this description are extremely perplexing, and it is indeed impossible to arrive at a conclusion with absolute certainty, the difficulty is here increased by the fact that the period of death in these persons is uncertain, and that both, when found, were already stiff and cold. Their appearance was that of ordinary sleep, neither their countenance nor their limbs were distorted, and it is hence highly probable that both were deprived of life at the same instant. They were apparently suffocated during sleep, or otherwise we should have noticed some indication of an attempt to restore themselves. A few minutes at the most could have intervened between their deaths, and from the examination, it would appear that the effects on the husband were the most rapid and decisive, as shown by the state of the heart and lungs. Still, as the woman was the weakest, and was subject to faintings, she may have died first. In fine, it is impossible to answer the question in a positive manner.

Our author objects to this indecision, and remarks that Pyl should have made a distinction between the various effects of the fumes of charcoal, as they either first attack the brain and cause faintness and apoplexy, or else suffocation (choking rheum). Now, on the body of the wife, no marks of the latter were discovered, whilst they were on that of the husband, and the probability therefore is that the wife died first.

Metzger has also noticed this case, and declares that he would have decided for the earlier death of the wife.—*Amer. Journ. Med. Scien.*, from *Wildberg's Jahrbuch der Gesammten Staatsarzneikunde.*

(*To be continued.*)

Poisoning by Snails.—A family of peasants living in the commune of Clermont, near Toulouse, fell a sacrifice to poisoning by snails. The physician who attended them communicated the details to the 'Journal de Toulouse:'—'From what I collected concerning the circumstances which preceded the disease, and those which accompanied it, and from the symptoms which I myself witnessed, I had no difficulty in recognizing a case of poisoning like those occasioned by narcotico-acrid vegetables, such as belladonna, hyoscyamus, thorn-apple, &c. No doubt remained in my mind as to the cause of this terrible disease, as soon as I knew that the snails eaten had been collected in the bushes called in French *redout*, but in the patois of the country, *roudout*. Every one knows that the leaves and young shoots are a poison to the domestic animals which browse on them, and that they kill them, after causing giddiness, and a kind of epileptic attack; but a fact which is not known is, that the flesh of these animals may occasion the greatest danger, and even death itself. Symptoms like those which I have just witnessed are rare; but it is common to see among our peasants indisposition caused by snails, which comes from their eating them as soon as they are gathered. The example of the ancient Romans should be followed, and these animals should not be brought to table until they have been kept six months or a year, feeding them with bran and wild thyme. This is the way also to make them fatter and more savory.—*New York Lancet*, from *Gazette Medicale*.

Electro-Magnetism in a Case of Poisoning, with Suggestions for its application to still-born Children, and some forms of Disease.—By Thomas S. Page, M.D., of Valparaiso.—A. T., an Englishman, the subject of this communication, aged twenty-two years, and of robust frame, is a clerk in one of the most respectable commercial houses in Valparaiso. He had a slight gleet, for which he prescribed himself pulverised cubebs of doses of half an ounce, night and morning, and experienced from them neither good nor bad effects. On the night of the 16th of March, 1842, he went to an apothecary's shop and asked for cubebs. Not having confidence in the lad in attendance, he requested permission to examine the label on the bottle, and read thereon "Pulv. Cubeb." He then ordered an ounce, divided into two parts, and with these returned home at midnight. He immediately took one of the

powders, placed himself in bed, and, as was his custom, took up a book to read, but, as he expresses it, had not read two lines before he felt a dizziness and inclination to sleep. I accidentally discovered him the following morning about twelve o'clock with these symptoms: face red and swollen; lips dark-purple; mouth containing a viscid frothy saliva; tongue has a dry and chapped appearance in the centre, and the teeth are slightly coated with a brown sordes; veins of the forehead and temples turgid; eyes rolled upwards, injected, and their pupils contracted to a point; skin moderately warm and moist, with clammy perspiration; feet cool; pulse very slow, moderately full, and dispersed by the least pressure; respiration very slow, short, and gasping. By agitating him violently he was aroused for a moment, uttered some incoherent expressions, and sank back into comatose sleep.

These were the symptoms when I first saw him. Dr. Houston of the Royal Navy, now practising in this place, and Dr. Barrabino, of the U. S. Navy, then attached to the U. S. schooner, *Shark*, came to my assistance. We administered the sulphate of zinc as an emetic, and hot mustard and water to arouse the sensibilities of the stomach to its impression. Large draughts of this, and titillation of the fauces, produced vomiting, and a small quantity of the powder apparently was brought up. The stomach pump was at hand, but as vomiting was readily provoked, it was not used. The patient was made to sit on the edge of the bed with his feet hanging in a tub of almost boiling water strongly charged with mustard. One cup was applied to each temple, and about two ounces of blood abstracted. Large sinapisms were spread over the chest and stomach and inner parts of the thighs. A very strong liniment of ammonia, cantharides, and turpentine, was applied to the whole length of the spinal column, until the skin became very red and inflamed. When the stomach seemed to be cleared of all traces of the poison, the mustard draught was suspended, and a large quantity of olive, with castor oil, administered, but only a part remained. The patient now appeared to be sinking. The surface was cold and covered with a damp sweat; the face was pallid, with a purplish tinge; the jaw and eyelids were fallen, when the patient, by powerful sternutatories and severe blows on the face and shoulders with the open hand, was with difficulty made to rise. Ammonia and brandy and water were now given, with light broths, and an injection composed of turpentine and ammonia. This produced a slight discharge from the bowels. The stimulating liniment already mentioned was repeated to

the spine and over the surface of the body. The pulse was hardly perceptible at the wrists, if, at times, it was at all to be felt. The stimulants were continued.

It was now 3 p. m. There were no signs of reaction, and the features wore the aspect of death. Under these discouraging circumstances, and when every effort seemed vainly expended, we now determined to dress the patient and supported by two strong assistants, to take him from his room, continue the stimulants and light broths, and endeavor to walk him in the cool air. At first he made feeble but unsuccessful efforts to direct the movements of his legs, but at length could not be aroused, made no effort to stand, and sank almost lifeless into the arms of his assistants.* He was carried to his room and placed in a slightly reclining posture on his bed. His breathing was now short and hurried; his mouth wide extended and jaw fallen; nothing seemed capable of arousing him; the exhaustion was extreme; the pulse could be felt feebly at the wrist, maintained there probably by the agitation which he had just undergone. Dr. Houstoun had left at a short time previous, Dr. Barrabino remained with me.

It was now 4 p. m., and worn out with fruitless efforts we desisted entirely from farther exertion. At this conjuncture I thought of my electro-magnetic battery, and proposed its application to bring about reaction, for I felt we were justified in such desponding circumstances to make it a matter of experiment. Cerebral congestion was urged as an objection, but admitted not to be sufficient, in such a desperate case, to set aside the experiment. It was immediately tried, and with the happiest results. With an assistant rapidly rotating the wheel, I applied the balls at first to each side of the neck, and ran them down behind the clavicles. The arms and body now moved convulsively, but the patient lay as unconscious as before. I now passed one ball over the region of the heart, and the other to a corresponding point on the right side. In an instant his eyes opened widely, and with a ghastly expression of countenance; his head and body were thrown convulsively towards me, and he groaned. He now sank back into his reclining posture, and he was again asleep. The balls were re-applied in the same situation with similar results—a third and fourth time, and he cried, "No more." Reaction was now positively established; the heart had received a

* Broths and stimulants were poured into his mouth, but he could no longer swallow them.

strong impulse; the pulse was becoming rapidly developed, and the whole surface warm.

We now determined to desist, and watching him attentively, allow him to remain quiet for an hour. Reaction continued satisfactorily, and when the hour had expired he could be awaked by shaking his body and calling loudly his name. There was no further occasion for the battery. He was aroused at intervals; and at eleven o'clock in the evening was sufficiently awake to relate where he had got the medicine the preceding night, but was still drowsy, and when not disturbed inclined to sleep. Thus he passed the night, and on the following morning was pretty well. He then told me that he had heard many things the preceding day that were said by persons about him, but he neither felt the power to open his eyes nor move his tongue to speak, although up to 3 p. m., when powerfully agitated and spoken to, he would reply in short and sometimes broken sentences, and occasionally correctly. He further says that the last thing he has any recollection of was my remark. whilst they were attempting to walk in the corridor, that nothing more could be done but to make the experiment. From that time all was blank to him, until, as he expressed it, "he felt as if a gun had been fired off within him, which thrilled through and shook him to the very extremities." This was the application and effect of the electro-magnetic battery.

I have said that cerebral congestion was thought at the time to make the application of the battery in such cases objectionable. The result proved the incorrectness of this opinion, and sustains this argument in favor of the practice adopted, viz:—By observing the phenomena of diseases a relation may be remarked between some of them in their earlier stages, whose terminations and consequences are quite dissimilar; apoplexy and epilepsy furnish an example. In both there is great cerebral congestion. The former generally terminates in effusion, and paralysis is the consequence; the latter terminates in spasms, and the patient returns to his usual health. Therefore it would seem that the muscular spasms equalise the circulation, and thus unload the brain; or, if we might suppose epilepsy to depend upon a determination, if I may use the expression, of the nervous principle to the nervous centres, the latter are relieved by throwing it off upon the nervous extremities, occasioning thereby spasm. Viewing these vital actions as the efforts of nature to relieve organs from the effects of undue accumulation, and restore

the equilibrium in the nervous and vascular systems, it appears probable that severe narcotism of the nervous centres may be diffused and shaken off by the revulsive action of the battery on the nervous branches, and that the consequent developments of vital action would give an impulse to the general circulation which might relieve the cerebral congestion.

A question might arise as to the power of the medicine taken to destroy life. On this point the melancholy death of Mr. C., a French gentleman, late of this place, who took the same medicine and in the same quantity but a few weeks previous, affords convincing testimony. In illustration of my subject I asked Dr. Cazentree, a French practitioner of this place, and the physician of Mr. C., for an account of the circumstances attending his death, and the autopsy, which he very politely communicated as follows:—

"Mr. C. was afflicted for some time with a gonorrhœa, for which, without medical advice, he took balsam copaiva, even in large doses, but to no effect. He was now attacked with orchitis, and for the first time came to consult me. After eight days of constant attendance the swelling which existed in the left testicle disappeared, but the blenorrhagia returned with more force. Vexed with this he again wished to take remedies which might relieve him at once of this afflicting disease. I recommended the use of the cubebs, which, taken for nine days, and gradually augmented to two drachms three times a day, had almost completely taken away this obstinate affection, when, on the 13th of February, not having any of the remedy left, he sent the same recipe to the nearest apothecary's shop.* At ten o'clock at night he retired to his bed-chamber well and cheerful. Without consulting any one, on lying down he took half an ounce of cubebs. No noise whatever was heard during the night, and at seven o'clock the following morning, when they entered his bed-chamber, they found him in a state of insensibility. Half an hour after I was with him, assisted by Dr. Veillon, and we found him in the following condition:—

"The body is in a state of supination; all the senses are extinguished, without hearing, speech, or movement; the eyelids are fallen, and when raised the eyes look cloudy and fixed; the pupils are dilated; extremities flexible; they obey the hand which raises them, and fall like an inert body; heat nat-

* He had previously got the cubebs at another shop, but on this occasion purchased it at the same shop where my patient subsequently procured his.

ural and equally diffused; face red; there are colored, blackish spots on various parts of the body, but principally on the back; when the body is moved a species of strong rale is heard in the bronchia; pulse slow, feeble, and very irregular; respiration hardly perceptible. Not knowing to what to attribute a state so suddenly produced and so grave, and recognising by the symptoms the appearance of asphyxia, and thinking he might have taken too strong a dose of the medicine, Dr. Veillon and myself proceeded in consequence to extract from the stomach the cubeb that it might yet contain, and to cause reaction by the most powerful excitants. But all was in vain, and at twelve (noon) life was completely extinct. Nothing now remained but to make the autopsy, which we did the following morning at seven o'clock. All the cavities and organs were examined with the greatest care.

"*Exterior.*—The face is pallid, the integuments livid, principally behind, and the corpse rigid.

"*Abdomen.*—The stomach with no trace of inflammation, contains a tumblerful of liquid, in which is observed a little of the powdered cubebs, mixed with some aliment, which is almost digested; the intestines are sound and healthy; the bladder is full of crystalline urine; the liver, spleen, and kidneys are full of black and fluid blood.

"*Thorax.*—The lungs are excessively engorged with blood, and when cut into with the knife this flows with a great abundance of froth from the bronchia; the left side of the heart is entirely empty, the right full of blood; the aorta and all the arterial system is entirely empty; the venous system of the thorax and abdomen, as well as the pulmonary artery, the vena cava and portæ, are full of black and fluid blood, which flows abundantly as soon as the vessels are divided.

"*Head.*—The veins of the brain are also congested, but the congestion of this organ is not as great as that observed in the thoracic and abdominal viscera. I repeat, that in no part was there red or coagulated blood found, but always black and fluid, and filling all that appertained to the venous system."

Before closing this subject, I would beg leave to add my impression that electro-magnetism will not only be found a most useful agent in cases like the above, but in some forms of disease, particularly those of a highly congestive character, where oppression of the organs and the nervous system prevent reaction and speedily destroy life. I need not occupy space in adducing cases illustrative of my meaning. In prac-

tice I think we frequently see cases where death seems to be caused by an *obstruction* of the functions or organic movements which support life, more than by an *exhaustion* of the organic functions or of life itself. And in such cases electro-magnetism might communicate an impulse which would renew those sympathetic actions between the organs (if no positive lesion exist in any of them) upon which the continuance of life depends.

In all cases of asphyxia, electro-magnetism must be useful; and I am strongly impressed with the belief that it might be applied in very many instances to still-born children with the happiest effects; for this purpose an instrument might be used of a very portable form,—that used by me in the case related consists of a large *horse-shoe magnet*, mounted upon a stand, in a vertical position, with an *armature*, fixed upon an axis between the poles, so as to revolve in front by means of a wheel. The *armature* consists of two cylindrical bars of soft iron, connected by a cross-bar, and in the *centre* of the bar is an insulated ferule; as near the end of the bar as possible is fastened the "*breakpiece.*" Around each of the cylindrical bars is wound *two thousand two hundred and fifty feet of wire*, covered with cotton thread, to prevent the current of electricity from passing from one wire to the other; the end of *one* of the coils is connected with the "*breakpiece*," and the other with the *ferule*. From one of the pillars, which are in *front* of the armature, the *springs* are made to act on the ferule and breakpiece. From the other pillar the spring connects with the *centre;* the *handles* are fastened by the *set screws* in the base of the pillars. There are four set screws in the back of the upright block of wood to set out the magnet, so as to make the armature revolve as close as possible to the magnet. The shock is communicated on ordinary occasions by grasping large brass handles which connect with the instrument by short coils of wire, which are painted red. To apply it to different parts of the body long wires, covered with cotton-thread, and terminating in brass balls, are used. Two glass cylinders enclose the wire near the balls, for the operator to hold by while administering the shock.

The above article, which we copy from the London Lancet, is also published in the American Journal of the Medical Sciences, for April, just received. Dr. J. Warrington, through whom it was transmitted to the latter Journal, received at the same time two parcels, one containing the half-ounce of

powder corresponding to that taken by the patient; the other a substance purporting to be cubebs, and bought at the same shop. These were given to Mr. Procter, Jr., for examination; he publishes an analysis of them in the American Journal, from which we copy so much as will show the nature of the deleterious substance.

The substance submitted for investigation consisted of two specimens; one labeled "sample of the powder corresponding to that which the patient took;" the other, "sample of the powder purchased by Mr. Peel whilst the patient was under the influence of the poison, who at my suggestion, went to the same shop and asked for an ounce of pulv. cubebs." They were severally enveloped in double papers and sealed; the first weighing about 100 grains, the second 200 grains; and their sensible properties accorded in all particulars.

The powder was dry, finer than cubebs ordinarily occur, and without the moist appearance usual to it. Its color was a uniform brown, its odour less aromatic and agreeable than that of good cubebs, and its taste pungent, though accompanied by a bitterness not found in the genuine drug.

In the paper accompanying the specimens, Dr. Page does not express an opinion as to the nature of the poisonous agent associated with the cubebs. A consideration of his remarks on the symptoms produced by the powder, suggested the idea that opium mixed with cubebs might produce all the effects there detailed. The sensible properties of the substance sustained this impression, and the addition of tannic acid and a persalt of iron to its decoction giving indications favorable to the presence of morphia and meconic acid, was considered sufficiently encouraging to cause a pursuit of the investigation with a view to the presence of opium.

* * * * * * *

The following is a summary of the substances isolated.

	In 100 parts.
Cubebin or piperin,	2.25
Morphia,	2.50
Meconic acid,	1.25
Narcotine,	Proportions not ascertained.
Narceia,	
Volatile oil and resin,	
Extractive and gum,	
Chloride of sodium,	
Lignin,	

As the object of this analysis is to ascertain the nature and properties of the deleterious agent associated with the cubebs, only those parts of the investigation have been given in detail, which, by proving the presence of morphia and meconic acid in the powder, render the existence of opium in it evident. That other principles, as codeia, meconin, etc., were also contained in it, there cannot be a doubt, but search for them would be as hopeless as it is useless. In conclusion, it may be observed that the quantities of morphia and meconic acid indicate the presence of about 30 per cent.. of opium in the powder, equal to 75 grains in the dose taken by the patient, and doubtless sufficient to have occasioned death.

Researches on Digestion.—By Bouchardat and Sandras. By feeding dogs with pure fibre, killing them at different intervals after taking the food, and examining carefully the contents of the stomach, intestines, and the chyle itself, and comparing them with the appearances presented in dogs killed while fasting, Bouchardat and Sandras have arrived at results which, while opposed to the usual belief of the physiology of digestion, seem to bear out the conclusions drawn by the illustrious experimentalists. They found that the fibrin was converted into a fluid in the stomach, was in fact dissolved. They found that the fluid did not pass into the intestines, or but a very small portion only, that all the truly dissolved matters were removed like other fluids from the stomach itself. That the matters which were found in the intestines of the animal killed when fasting were identically the same as those of the animal fed with a full meal of pure fibrin, only the latter contained a slightly greater proportion of fibrin in a dissolved or fluid state. The chyle, too, of the fasting animal presented the exact same qualities as that of the animal which had a full meal of fibrin, the proportion of dissolved fibrin in it was only very slightly greater.

It was found that the solution of the fibrin in the stomach took place by means of hydrochloric acid, and that the same process could be imitated out of the body by mixing a quantity of hydrochloric acid, so small as scarcely to affect litmus paper, in distilled water, and immersing in it a morsel of fibrin. After twelve hours, at the the ordinary temperature, the fibrin was found converted into a gelatinous mass, which, if dissolved in distilled water and filtered, could not be recognized to differ in any chemical character from the fibrin found

dissolved in the stomach of the dog. These experimentalists, therefore, regard the hydrochloric acid as the essential agent in the solution of the fibrin; and as the experiments of Hallé, Magendie, and other physiologists prove, that alcohol and other fluids, colored and uncolored, are removed directly from the stomach by means of the venous system, and cannot be recognized in the chyle while their presence can be detected in the blood, Bouchardat and Sandras have no hesitation in stating, as the result of their observation, that the same takes place with the fibrin after it has once become dissolved.

They performed analogous experiments on dogs with gluten, and found the very same results were arrived at. It formed a solution in the stomach precisely similar to that of fibrin; was removed from the stomach in the same manner, without passing into the intestines in any appreciable quantity; and dissolved out of the body by means of water slightly acidulated with hydrochloric acid. Albumen and pure caseum underwent solution in diluted hydrochloric acid in the same manner, and furnished the very same reactions with chemical agents.

A number of other experiments were made on the digestion of starch, sugar, &c., from which it appeared that these substances all became converted in the stomach into lactic acid, and were removed from it directly in the same manner as the dissolved fibrin, gluten, &c., had been. The chyle of animals fed with these non-azotized matters yielded no traces of starch and scarcely any of acid. In all animals the chyle was alkaline, or quite neutral. When dogs are fed on substances which they loathed, and would have vomited were the œsophagus not tied, the chyle was neutral, but when fed on bread or potatoes was always alkaline.

Experiments were also made on feeding dogs with fat. It was found that this substance was not altered in properties in the stomach, as pure fat was obtained from the pultaceous mass. The other liquids present in the stomach were acid, and contained hydrochloric acid. In the duodenum a yellowish-colored emulsive mixture was found, with a neutral reaction, which yielded fat when washed with ether. The other small intestines contained also a similar matter which furnished fat to ether. The thoracic duct furnished a white milky-looking chyle, much whiter than was ever seen in the former experiments, and when washed in ether furnished a notable quantity of fat.

These experiments seemed to prove that fat is digested in a very different way from the other nutritive matters; that it

undergoes no change in the stomach, but that its chief changes occur in the duodenum; that, in fact, those changes occurred to it there which facilitated its absorption. These changes are, however, very simple. The pancreatic fluid and the bile mixing with the fatty matters, form a simple emulsion, without changing the chemical nature of the fatty matters. If these contain margaric and oleic acids in their natural state, they are saturated by the alkali contained in the pancreatic juice and in the bile. In this state they are absorbed by the orifices of the chyliferous vessels, and from thence carried into the thoracic duct, and mixed with the chyle. The analysis of the chyle proves this fact, and the examination of the contents of the bowels, at all parts of their course, prove that they contain fatty matters, which, if given in too large quantity, are even excreted with the feculent matters.

Bouchardat and Sandras draw the following important conclusions from their experiments:—

1. In digestion, the functions of the stomach consist in dissolving with the aid of hydrochloric acid, all albuminous matters, as fibrin, albumen, caseum, and gluten.

2. This acid, if diluted with 5000 parts of water, dissolves the same matters out of the body, provided they are not cooked; but if boiled the solution has no action on them. As they are found to be dissolved, however, in the stomach, it is probable that some other agent is at work than simple solution by means of hydrochloric acid: but the presence of that acid seems to be always indispensable.

3. As far as the albuminous matters are concerned, digestion and absorption take place exclusively in the stomach; the intestines present scarcely any traces of those dissolved matters which exist in such abundance in the stomach.

4. Solution of fecula also occurs in the stomach. This principle does not appear to pass into the state of sugar, and the experiments do not even warrant the statement that it passes into that of soluble starch; we regard as proved, its transformation into lactic acid.

5. The absorption of this kind of aliment seems to take place less exclusively from the stomach than that of the albuminous matters, a circumstance which would accord with the particular disposition and length of the intestines in animals not carnivorous.

6. Fatty matters are not attacked in the stomach. They pass into the duodenum in a state of emulsion, in consequence of the alkalies furnished by the liver and pancreas.

This emulsion is found abundantly throughout the whole course of the intestines.

7. The chyle has appeared to be somewhat less abundant, but presenting similar characters in the animals which were killed after long fasting, and in those killed after being fed on copious meals of albuminous matters and of fecula. It has only presented a marked difference in those fed with fat, when this principle was met with in it in considerable proportion.

Differing as these views do from those at present in vogue relative to digestion, Bouchardat and Sandras add a few remarks on the peculiarity of their views and the probable use of the chyliferous system of vessels. It is to be remembered that they found that the chyle procured during the digestion of fibrin did not differ in a single character from that procured from an animal fed on fecula alone, or in a state of starvation. That, in fact, these matters had not been converted into chyle. One important fact they ascertained to be was, that these chyliferous vessels absorbed the fatty matter, but this cannot be their sole use. During digestion a large quantity of hydrochloric and lactic acids are secreted and thrown into the stomach. These acids must come from the decomposition of salts existing in the system—chloride of sodium and lactate of soda. The abdominal glands prepare for the chyliferous vessels and thoracic canal, a chyle, the alkalininity of which is greater in proportion to the acidity developed in the stomach; and thus chyle, which is not solely produced by the absorption of aliments, but by a process of true secretion, mixes with the blood, to neutralize the acid which was indispensable for the solution of the food in the stomach. This simple process allows the blood to be continually repaired, without appreciably changing its nature.—*Annales des Sciences Naturelles*, October, 1842. *Bulletin Med. Sci.*

The Treatment of Pneumonia in Guy's Hospital.—The pure Antimonial cure.—No one mode of treatment should be adopted in pneumonia. To say that venesection, twice or thrice repeated, or antimony, or calomel and opium, should always be the remedy, would be dangerous in practice. If the disease existed always in persons of the same habits, country, and locality; was always presented in the same stage,

uncomplicated (and so on), then one treatment might be adopted with advantage; and tables, showing the cures and deaths, from one or the other mode, might be trusted as guides. But each case should be more or less studied by itself. I shall presently have to recommend moderate venesection, followed by calomel, opium, and antimony; but a young man was admitted into Guy's hospital a few weeks ago suffering from pneumonia, passing to the second stage; no indication of tubercles could be discovered; he had no typhoid symptoms; but he was so feeble that bleeding would have killed him, or antimony would, I believe, have extinguished life. He was treated for the first twenty-four hours with ammonia; after which he was ordered in a pill,—two grains of blue-pill, two of extract of hyoscyamous, and one of ipecacuanha,—and a draught composed of ten minims of liquor potassæ and an ounce and a half of decoction of bark, every six hours; a blister to the side, and mild nutritious diet. It is true that a few days after, when he had improved in power, he was put upon calomel and opium, and antimony; but these were withdrawn in two days. He then had merely a little saline medicine, followed by quinine; blisters to the affected side were several times repeated during the period, and he left the hospital in a few weeks, cured of his inflammatory complaint, though still weak. He will probably ultimately die of phthisis.

In the average of cases in this hospital a considerably larger proportion of those who were bled recovered, than of those who were not. But that venesection is therefore advantageous in pneumonia, abstractedly considered, could not be fairly supported, as venesection was, I believe, practised in *all cases*, excepting in those who were already too much debilitated, or too slighly affected.

The plan for many years generally adopted in Guy's Hospital, in acute pneumonia, has been to bleed the patient to approaching syncope, and to administer a pill, containing half a grain of opium, and a quarter of a grain of tartarised antimony with one or two grains of calomel, every three, four, or six hours, according to the severity of the symptoms, usually combined with a saline mixture, containing twenty or thirty minims of antimonial wine. If, in a few hours, or next day, the general symptoms have been unsubdued, or have returned, venesection has been repeated. It has sometimes been necessary to bleed again and again. Triple venesections have been uncommon, and a fourth very rare. If the general symptoms, on the contrary, have been reduced, though the

local affection has continued severe, or if the patient's power has been materially diminished by venesection, cupping has been ordered, to from six to twelve ounces. On a decrease of the disease, the medicines have been less frequently repeated, or stopped, even though the mercury has not affected the mouth. If the system has evidently become affected thereby, but the complaint is still active, it has usually been discontinued, or repeated only in small unfrequent doses. Blisters also have been applied with good effect in the latter stages. The utility of the latter remedies has been doubted; but I state my thorough conviction of benefit being derived therefrom, in very many instances. The foregoing treatment has been, on the whole, so efficient that no important change has been considered justifiable.

I have frequently been desirous of trying the pure antimonial, or contra-stimulant, treatment; but in so important a disease I have not felt justified in discarding means which have so often effected a cure. I must, however, confess that the results of the treatment of pneumonia in Guy's Hospital—if all cases, however advanced, and however complicated, be taken into account—are not to be compared with what are stated to have been the "triumphant" effects of antimony. Thus Laennec says, that of 62 cases treated by antimony, only 6 died, two being moribund on admission, two old men of seventy, with cerebral congestion and pleurisy, and the sixth under disease of the heart. Others are reported to have lost only 1 in 30 and 1 in 40 cases. However, my observation is entirely opposed to Laennec, when he states that he has never known the disease renewed when antimony had effected amelioration. In the Infirmary of Edinburgh, while I was a pupil there, a patient after two venesections, leeches, and continued antimony, was considered almost convalescent. The antimonial solution was however continued. But when the disease had for four days appeared to be rapidly decreasing, the attack was renewed; and it was necessary again to bleed him to ten ounces, after which he rapidly recovered. The same has certainly happened in several cases that have fallen under my notice. In some instances, also, when antimony has been at first employed with benefit, but relapses have taken place, it has appeared necessary for the cure to administer calomel and opium in combination with it. Nevertheless, I believe antimony to be especially useful in persons who cannot bear the abstraction of blood, and those in which mercury is contra-indicated. In such cases, as in the pneumonia and bronchitis of children after measles, I have occa-

sionally administered it, and with manifest advantage. The patients have, it is true, died from another complaint; but that complaint has been, I have thought, produced by the remedy employed for the pneumonia.

The great authority last quoted considers antimony to be equally efficacious "in any stage of the disease, even after a great portion of the lung has undergone purulent infiltration;" and supposes that it may act by "increasing the activity of *interstitial* absorption." But the well-known action of mercury in promoting the absorption of effused matter, clearly points it out as the medicine especially indicated when there is inflammatory deposit.

From the whole circumstances, I believe that antimony is a very active remedy in pneumonia, more particularly indicated in slight and recent cases, those complicated with bronchitis, and those in which venesection cannot be borne or repeated, and mercury cannot be safely employed; that the cases are often more rapidly relieved by it than by any other means, but that they are also more than ordinarily liable to relapses; and that when consolidation has obviously occurred, it should not be trusted alone, but should always be given with mercury.—*Dr. Hughes, Guy's Hosp. Rept.*, October.—*Lancet.*

Communication of Pulmonary Air Vesicles by a direct route with the Pulmonary Veins. By W. E. Horner, M. D., Prof. of Anatomy in the University of Pennsylvania.—The following experiments go to determine this point.

Exp. I. In July last I lost a patient, James Roomy, ætat. 19, at the Philadelphia Hospital, who had been treated by me for calculus of the bladder, by lithotrity. On the examination of him after death finding the lungs in a state of perfect health, they were removed and taken to the University. I then fixed a pipe into the trachea and permitted a column of water to pass gently. The lungs filled up very completely, the air cells became distended with water, and somewhat to my surprise at the time, (for I had no such result in view, but merely to wash the lungs well for ulterior anatomical purposes,) the left side of the heart filled and the aorta began to discharge water from its cut branches very freely, in fact in a strong jet when compression was made so as to reduce the size of the stream in its exit.

No stream made its appearance from the right side of the

heart, the water not showing any current in that direction, not even in drops, nor filling the pulmonary artery.

These observations were repeated at several trials of a separate kind on the same pair of lungs on the same occasion, and were renewed the next day. The result was announced at the time to Dr. Samuel Jackson, my colleague as we were in consultation on a patient.

Exp. II. In December last, a young athletic man lost both his legs from a railroad accident, followed by amputation. Having got his lungs with the heart attached, I renewed my experiments on the free communication of the air vesicles of the lungs with the pulmonary veins, and found the same results from a column of water gently let into the trachea—the left side of the heart readily filled, and the branches of the aorta spouted out water. The pulmonary artery and the right side of the heart did not fill, but a little water after a while returned by them, not however in any approximation to the quantity discharged by the aorta.

Exp. III. *Feb.* 16*th.* A Malay about thirty years of age, athletic and well formed, belonging to an East Indiaman, committed suicide about a fortnight ago. He stabbed himself in the abdomen so as to sever the colon and duodenum, and also opened the external carotid artery; by these several wounds he was well drained of blood. He was injected so as to retard putrefaction; the weather also has been highly favorable from its coldness, to the same end. The lungs today were in a state of perfect soundness, and of elegant normal texture and colour, so that I exhibited to the anatomical class the best specimen of them in a state of exact physical soundness with freedom from congestion of blood, that I have met with in thirty years of anatomical pursuits. In the evening I injected the left lung according to my plan, with tallow, having in view the connection of the air vesicles with one another.

On the 17th, I applied as in the two preceding experiments a column of water upon the lung of the right side. In a very little time I found the water returning by the pulmonary veins *pleno rivo*, and a very scanty show of it in the right pulmonary artery, not enough to discharge except by drops in a very slow manner. The experiment was renewed on several trials, and the results the same.

It may here be remarked that the return of the fluid by the pulmonary veins was much more rapid in the beginning than towards the end of these experiments, for when the lungs be-

come infiltrated with the water the connection of the air vesicles and the pulmonary veins is not so free.

Exp. IV. *Sept.* 1842. On the lungs of a hog taken from a slaughter-house, the experiment done in the same way showed no communication either with pulmonary veins or arteries on the part of the air vesicles.

Exp. V. On the lungs of a sheep, resulted in failing to show also any communication with the pulmonary arteries and veins on the part of the air vesicles.

Exp. VI. On the lungs of a calf, also failed to prove the communication between the air vesicles and the pulmonary blood-vessels.

Among the venerable rites of that ancient people, the Hebrews, is a scrupulous regard to the perfect healthiness of the flesh that they eat, and also to the animal when slaughtered having the blood almost thoroughly evacuated. At the suggestion of my friend, the editor of this Journal, I obtained the lungs of animals prepared for market by one of their butchers, and the following results occurred in the lungs of the calf and sheep.

Feb. 25*th*. Exp. VII. On a calf. The lungs, upon the introduction of water into their air vesicles, began to return the water in a little time by the pulmonary veins and the pulmonary arteries. In keeping up the pressure of the column, it returned by a large free stream from both sets of vessels.

Exp. VIII. On a sheep. The lungs under the same regulated pressure of a column of water, returned it by the pulmonary arteries and veins also in a clear large stream.

In neither animal, however, did it return with equal freedom as in the human subject: though, in the lungs of the calf, the stream was sufficiently copious to wash back several large coagula of blood from the pulmonary artery.

The preceding experiments would go to prove the existence of a direct communication between the air vesicles and the pulmonary blood-vessels, especially the veins. A suggestion to the contrary, which may have some force, is, that the connection, as above established, is not by direct inosculation, but by infiltration: to which it may be replied, that in such case the injected fluid, by passing into the common connecting cellular substance, would constitute an intervesicular and interlobular dropsy, which would show itself by the water raising up the pleura in large vesications or bags—and by its forming large interlobular collections—also by the incapacity of the lungs to contract to the normal size in a short time.

after the pressure of the water was withdrawn and the trachea left open. The lungs would at least remain for a time of a size nearly stationary on the suspension of the experiment, as in the carnification arising from the large effusions of blood into its substance in violent pneumonia. Now if prudence be observed in the experiment, none of these events occur, but the lungs collapse almost as readily as if they had been distended simply with air.

Exp. IX. On the fresh lungs of a large bullock. The residuary air of the pulmonary vesicles was, by the force of a column of water, driven from the lungs into the pulmonary blood-vessels, and the pulmonary artery was distended and inflated with the condensed air, so as to give it a tension and elasticity like that of a strongly inflated large intestine. With this state of things there was no emphysema of the lungs, which would follow inevitably without a direct communication between their air vesicles and the pulmonary vessels.

In the same lungs the current of water sent into them through the trachea, returned so freely by the pulmonary artery as to make a jet six or eight inches long, and of the size of the little finger; it also came out in a free jetting stream from the branches at the arch of the aorta. These jets could be increased, diminished or stopped without delay by the turning of a stop-cock.

Exp. X. On the lungs of a pig. I first of all inflated them by the pressure of a column of water acting on a reservoir of air. The air was found to pass readily to the heart by both pulmonary veins and arteries, but with especial freedom by the latter and distended them strongly. Having satisfied myself of this result, I then let in a column of water, which, as in the other experiments, returned freely by the pulmonary blood-vessels, being indicated by a bold stream from the pulmonary artery and aorta.

The abundance of the pulmonary capillaries, and their thinness and superficial position may be considered as additional arguments in favor of the conclusion drawn above, of direct inosculation with the air vesicles, but of course by pores which must be exceedingly fine. The lateral pressure of a column of water upon them would, without such inosculation, have the effect of water in the bladder upon the ends of the ureters, and would prevent itself from getting into them.

The foregoing experiments may serve to elucidate some of of the phenomena of respiration and of pulmonary hemorrhage.

The fact appears to be overlooked by pathologists generally, that the bright color of the blood in hæmoptysis, and the more superficial position and greater numbers of the pulmonary capillary veins, indicate that they are the true fountains of its blood instead of the arteries:—opinions which have for many years past been taught by me, on the ground of my minute injections of the lungs.

I may also state that with these experiments of the unquestionable transmission of fluids and of air into the pulmonary vessels from the air vesicles, we can now account for what every experienced anatomist has often observed, and will in every case see, to some extent: that there is always air in the pulmonary artery, the left side of the heart, and the aorta, after death, however recent the death may have been, and also account for the mistake of the ancients that the arteries conveyed air naturally, inasmuch as they were found filled with it after death, an error which has been indefectibly commemorated in the name of these tubes.

As leisure offers I propose to go on with the experiments on the above question of continuity between the blood-vessels and the vesicles of the lungs; but hope that in the mean time it may attract the inquiries of others more competent to settle the precise mode of this continuity.—*Amer. Journ. of the Med. Sci.*

Luxation of the Patella on its axis. By Joseph P. Gazzam, M. D., of Pittsburg, Pa.—Sept. 10*th*, 1842. This evening at 7 o'clock, James, aged 21 years, son of Judge Porter, of Pittsburg, was thrown while wrestling, and immediately found himself unable to rise.

On seeing him about an hour after the accident, I found the patella of the right leg dislocated on its axis, i. e. it was lying on its edge—presenting the posterior face outward, and the anterior face inward—the inner edge resting in the groove between the condyles of the femur.

Flexing the thigh on the pelvis and straightening the leg, I endeavored to replace the bone by pressing its edges in opposite directions, but failing (after repeated trials) I requested that the patient should be brought to town, (the accident happened three miles out of the city), and additioncl advice procured.

At about 12 o'clock the patient was brought to his father's house, where I met Dr. Addison. After repeated unsuccess-

ful attempts at reduction, it was thought well to lessen the tension of the joint by dividing the ligament of the patella. This I did by introducing beneath the skin a narrow-bladed knife, and cutting the ligament close to the tubercle of the tibia. Again we attempted reduction but failed. The patella could be moved on its edge more freely than before the cutting, but resisted all our efforts to replace it.

Dr. Speer was now joined to the consultation, and in accordance with his suggestion the patient was placed erect, a vein opened, and the blood allowed to flow until the approach of syncope, when the efforts at reduction were renewed—but although the patella could be moved on its edge, it could not be lifted out of the groove in which it rested. It was now agreed to let the patient rest for a few hours.

11*th*. At 8 A. M. the consultation was resumed, and it was now proposed to adopt with some modification the plan of Dr. John Watson, of New York, as detailed in the *N. Y. Journ. of Med. Surg.* No. 2, and republished in the *Am. Jour. of Med. Sciences*, vol. 25, p. 252.

The thigh was strongly flexed on the pelvis and the heel elevated. Then the leg was flexed steadily and forcibly on the thigh and suddenly straightened. At the moment of straightening the leg I pressed very strongly against the lower edge of the patella from without, with the head of a door key well wrapped, while Dr. Addison pressed with both thumbs against the upper edge of the bone towards the external condyle. On the fourth trial this manœuvre succeeded, the bone springing into its place with a snap. A cushioned splint was placed behind the knee and secured by a bandage—an evaporating lotion was used, and the patient kept at rest. Recovery was uninterrupted, and the young man has now perfect command of the limb.

To the inexperienced it may seem that I have attached undue importance to this case by reporting it for the medical public; but I have no fear that those who have encountered such a case will think it altogether valueless.—*Amer. Journ. Med. Sci.*

On Abnormal Nutrition (commonly called Inflammation), and on the mode in which its different Products are developed, as Softening, Suppuration, Granulation, Reorganization of Tissue, Morbid Growths, &c. &c.—Dr. J. H. Bennett, in a communication read to the *Medico Chirurgical*

Society of Edinburgh, commenced by alluding to the well-known fact, that the blood circulating to every part of the living organism, carried with it the principles of nutrition. These appear to exude through the minuter vessels dissolved in the liquor sanguinis or blood plasma, which constituted a blastema or formative fluid for the formation of nucleated cells. The cells thus formed, underwent different kinds of development, some being formed into bone, others into muscle, nerve, tendon, filamentous tissue, and so on. The insensible formation and development of these cells constituted healthy nutrition.

This process might be deranged, or rendered abnormal, in various ways: 1*st*, from an increase or diminution in the whole mass of the blood; 2*dly*, from a greater or less change in the relative amount of its different chemical constituents; and, 3*dly*, from mechanical and other causes acting more especially upon any part of the frame. It was to the phenomena accompanying the latter condition that Dr. Bennett was desirous of directing the Society's attention. These were rapidly described, as they have been observed by numerous authors, and confirmed by Dr. Bennett, viz: 1*st*, Contraction of the capillaries, and diminished velocity through them of the flow of blood; 2*dly*, Dilatation of the capillaries, and diminished velocity of the blood's current; 3*dly*, Oscillation of the column of blood, and encroachment on the lymph spaces; 4*thly*, Complete stagnation of the blood, the red corpuscles crowded together in an amorphous mass, and brought into immediate contact with the vascular walls.

During the latter stage of this process, or at its termination, three circumstances might take place: 1*st*, Effusion of serum; 2*dly*, Exudation of blood plasma; and, 3*dly*, Extravasation of blood by rupture of the vessel. The object of the communication was to describe the changes which followed exudation of the liquor sanguinis.

The blood plasma on being exuded from the blood-vessels, might remain fluid for some time, and would then be necessarily reabsorbed. Vogel and Vogt refer to cases where on cutting across small cavities in the brain, the fluid they contained immediately coagulated. More frequently, however, instead of remaining fluid, the blood plasma coagulates. When this has once occurred, it undergoes changes, which vary in different cases, before it can be reabsorbed or removed from the system. The material exuded constitutes a blastema for the formation of nucleated cells, which gene-

rally, though not always, vary in character according to the nature of the tissue in which the exudation takes place.

In parenchymatous organs, the liquor sanguinis usually coagulates in the form of granules, which may be seen coating the vessels, and filling up all the space between the ultimate tissue of the organ. By this process, the organ affected is rendered perfectly dense or hepatized. After a time, or during the exudation, nucleated cells, (*exudation corpuscles*), are formed, which vary in size from 1-100th to 1-25th of a millimetre in diameter. They become filled with granules from 1-500th to 1-700th of a millimetre in diameter. The cell wall then bursts, and the granules escape. By means of this process, and the development of the exuded mass more or less into cells, it is broken up, and rendered fluid. Thus the morbid state in organs, named *softening*, is produced.

The exudation corpuscle may be distinguished by its undergoing no change on the addition of acetic acid. Ether and caustic potash entirely dissolve them; liquor ammonia renders them soft and easily broken down.

On the surface of serous membranes, the exudation generally passes into cells and very minute fibres. These cells (*plastic corpuscles*) are transparent from 1-100th to 1-75th of a millimetre in diameter, formed of a delicate wall, containing granules 1-1000th to 1-600th of a millimetre in diameter, varying in number from 3 to 12. They are not perfectly round, but somewhat irregular in form. The mode of formation of the minute fibres is unknown. Gulliver has pointed out that they are not the result of cellular development.

The plastic corpuscle may be distinguished by its wall contracting, and the edge becoming thicker on the addition of acetic acid. The shape is also rendered more irregular; it is dissolved in ether and caustic potash, and not affected by water.

In the skin, loose cellular tissue, &c., the exudation commonly passes into cells, usually from 1-100th to 1-120th of a millimetre in diameter, perfectly round, with a defined edge, containing several granules, and sometimes a round nucleus. These cells (*pus corpuscles*) swim in a fluid, roll freely on each other, are of a yellow-greenish color, and constitute the organized part of the fluid universally known as *pus*. They are not formed from the exudation corpuscle, or epithelial cells, as has been supposed, but arise primarily from the exuded blood plasma.

The pus corpuscle may be distinguished by its swelling out

and becoming more transparent on the addition of water; by the cell wall being dissolved, or nearly so, in acetic acid, whilst the nucleus is rendered more distinct in the form of two or three granules, generally from 1-300th to 1-400th of a millimetre in diameter. They are dissolved in ether and concentrated alkalies.

The exudation, plastic, and pus corpuscles, although most commonly formed in the situations referred to, are not exclusively so. The pus corpuscle may sometimes be formed in parenchymatous tissues, and exudation corpuscles in cellular tissues. Sometimes they may be more or less mixed together. Thus the plastic and exudation corpuscles are commonly formed in the lung; and exudation corpuscles may frequently be found swimming among those of pus.

The exudation may also pass into *organization of tissue*, apparently by the same process as takes place in a state of health. Should it exist in small quantities, and further exudation be checked by bringing the divided parts into apposition, reorganization of tissue occurs *rapidly*, and *union by the first intention* is established. On the other hand, when this process takes place *slowly*, a state called *hypertrophy* is produced.

When loss of substance is occasioned, the exudation passes partly into organization of tissue, and partly into pus corpuscles, by means of which a *granulating surface* is produced. A fungous granulation examined under the microscope, exhibits all the stages of development presented by cells, passing into fibres, as figured by Schwann. Externally these are covered with pus corpuscles. As the former increase the latter diminish, until at length a normal tissue is reproduced, or a dense fibrous mass denominated *cicatrix*.

Lastly, the exudation may be transformed into nucleated cells of different shapes, round, oblong, caudate, stellate, more or less square, &c. &c., either mixed or unmixed with fibres, constituting the different kinds of morbid growths, as indicated by Müller.

Thus in the same manner as in a state of health, cells originating in the effused liquor sanguinis, may undergo different kinds of development, as into fibre, muscle, nerve, &c., constituting *normal* nutrition; so in a morbid state cells originate in the exuded liquor sanguinis, which are transformed into exudation, plastic, pus cells, tumours, &c., constitutihg *abnormal* nutrition.

Dr. Bennett agreed with Andral and Magendie in considering that the term inflammation was inapplicable to the expla-

nation of the phenomena he had described. He pointed out how the cardinal symptoms of inflammation, pain, heat, redness, and swelling, were partly dependent on the exudation, and partly on the congestion which preceded it. He had even seen some cases of encephalitis, where the central parts of the brain were softened, and contained numerous exudation corpuscles, although during life no pain or heat, and after death, no redness or swelling had been observed.

Inflammation, therefore, was only a part of one great morbid action occurring in the frame, which might be denominated abnormal nutrition, and more especially that species of it dependent on increased exudation of liquor sanguinis.

Numerous authors had referred inflammation to increased nutrition or secretion. Dr. Alison more especially seemed to consider this essential to the inflammatory process, (Lib. of Med., Art. *Inflammation*). Before the doctrine of cytogenesis was established, however, nutrition of parts was invariably connected with vascularity, and pus was considered an unorganized fluid. At present we must regard pus, lymph, softening from exudation, &c., as being highly organized, and resulting from an active process of nutrition. Hitherto increased nutrition, as connected with inflammation, has been mere hypothesis; Dr. B. stated, that it was the object of his communication to *demonstrate* its correctness.—*Lond. and Eden. Month. Journ. Med. Sc.*, Dec. 1842.—*American Journ. Med. Sci.*

Tubercular Deposits in the Bronchial Glands.—Drs. Rilliet and Barthez, from their extensive researches into this interesting subject, find, that, by compressing the vena cava superior, tubercular enlargement of the bronchial glands may be followed by—1. Œdema of the face; 2. Dilatation of the veins of the neck; 3. Livor, in a greater or less degree, of the countenance; 4. Hemorrhage into the arachnoidal cavity.

By compressing the pulmonary vessels they occasion—1. Hæmoptysis; 2. Œdema of the lungs.

When they press upon the pneumogastric nerves, they cause—1. Alterations in the pitch and quality of the voice, and cough; 2. Violent fits of coughing, resembling those of hooping-cough; 3. Asthmatical attacks.

The action of enlarged and tubercular bronchial glands on the lungs and bronchi is very remarkable. By compressing the air-passages, they produce—1. Sonorous *râles* of great

intensity, very persistent, and of which the quality is sometimes very peculiar; 2. They impede the access of the air, whence follows obscurity in the respiratory murmur, though this sometimes depends on the œdema of the lung, which is consequent on the pressure upon its returning blood-vessels. Sometimes they serve as conductors of sonorous vibrations, from which the following effects ensue:—1. Alterations in the character of the respiratory murmur, the lungs themselves being perfectly healthy, such as prolonged expiration, bronchial respiration, and all the sounds which, in the normal state, must take place in the bronchi, but which do not reach the ear; 2. Great extension of the stethoscopic indications of any particular lesion, as from the one side of the chest to the other.

The observations, of which the above summary is given, were made upon children.—*Lond. and Edin. Med. Journ. Med. Sci.*, Feb. 1843, from *Archiv. Gén. de Méd.*, December, 1842.

Pulmonary Consumption in Man and Animals.—Rayer read a long memoir on this subject to the French Academy of Sciences, on the 25th July last. The following are his conclusions:—

1*st.* Of all chronic diseases, pulmonary consumption is the most common in man and animals.

2*d.* In man and other mammalia, the tuberculous matter can always be easily distinguished from recent pus, which is loaded with seed globules. In birds, the characters of tuberculous matter are less marked; foreign bodies introduced into the lungs and flesh, do not produce an opaque white humor, full of seed globules, but a dry yellowish matter, without globules, whose physical characters approach those of tubercles in the mammalia. In reptiles, fishes, and insects, the characters of tubercle are still less distinct.

3*d.* Pus, in the mammalia, and chiefly in the horse, if it remains long in any organ, undergoes successive transformations, so that at last it resembles tuberculous matter.

4*th.* Pulmonary tubercles in man and in the quadrumana have generally a gray color; in the *pommelière* of the cow the tuberculous matter is yellowish.

5*th.* In man and animals the softening of the tuberculous matter in the centre cannot be attributed to inflammation, as no pus globules are ever seen; the softening, however, on the

circumference is much assisted by the inflammation of the contiguous tissues, and it is almost always mixed with pus globules.

6*th*. The yellow matter which is found in the cysts of hydatids in the ruminantia after the destruction or spontaneous rupture of the cysts, has some analogy with tubercular matter, (*pommelière;*) but the cysts of this yellow matter almost always contain the debris of the hydatid pouch, and sometimes a certain quantity of pus.

7*th*. The earthy or calcareous concretions (principally composed of carbonate and phosphate of lime) which are met with in the lungs of man, and other animals, ought not to be considered, as they are even to this day, as being almost always a modification of tubercle. They are frequently in man, and very often in the horse, the residue of a small depot of pus

8*th*. Granulations depending on worms and on glanders form in the lungs of several animals, which ought to be distinguished from tuberculous granulations.

9*th*. Among the quadrumana, and some birds brought from warm climates, consumption shows itself in its greatest degree, and almost to the exclusion of other chronic diseases. It is equally often produced in other animals coming from the north, as the rein-deer, by a change of climate and food.

10*th*. Consumption, which is rare among the domestic herbivorous (solipedes) animals, is still rarer among the carnivorous. However, notwithstanding the preservative influence of a strong constitution, and an animal diet, several of the carnivora, as the domestic cat, and especially the lion, tiger, and jaguar brought to our country, have been seized with phthisis. This rarity of consumption is also seen in birds which are rapacious.

11*th*. By a kind of contradiction, the domestic dog among the carnivora, and the hare among the herbivora, are less subject to tubercles than to cancer, a disease which Camper thought never attacked the lower animals.

12*th*. Among the ruminantia, and especially in the class boves, consumption is often associated with vesicular worms, and particularly with the echinococcus; but, contrary to the opinion several times given, there is no transformation or succession between these hydatids and tubercles.

13*th*. Fatty liver is the common accompaniment of consumption in man, and general obesity in birds.

14*th*. The alterations of bone which are observed in simiæ affected with this disease, and more particularly in those from

New Holland, appear analogous to the deformities, swelling, and spongy softening of the bones seen in phthisical and scrofulous children. Similar alterations of bone take place among the carnivora brought to this country from a warmer climate.

15*th*. If the frequency of pneumonia, and the rarity of consumption in the domestic dog, would appear to do away with any connection between these diseases, the same thing cannot be said to occur in the calf, cow, or female ass, as in these the deposit of tuberculous matter almost always coincides with a chronic and increasing pneumonia.

16*th*. Consumption is hereditary, but it is almost never congenital, even in the rudimentary state.

17*th*. Among people affected with phthisis, the semen contained in the seminal vesicles contains few or no spermatic animalcules.

18*th*. Ulcers in the larynx, trachea, and bronchi, do not indicate the same thing in man and animals. In the former, they are almost always owing to consumption, and sometimes to syphilis; among the quadrumana to general tubercular diathesis, and among quadrupeds almost always to glanders.

19*th*. In pneumo-thorax, mouldy vegetations may form on the altered pleura of a phthisical patient, as sometimes takes place in the air-sacs of birds affected with consumption, or other diseases of the respiratory organs. In this case, as in all those which have been observed among the vertebrata, the development of these parasites is a secondary phenomenon.

Rayer classes the causes of consumption under four heads: A domestic state and captivity for the inferior animals, and misery and fatigue for man; and he concludes that science, which is altogether powerless in curing the disease, ought not to be so in preventing it.—*Lond. and Edin. Monthly Journ. Med. Sci.*, Dec. 1842.

In opposition to the seventh conclusion of R., Prus asserts that for ten years he had been endeavoring to ascertain, at the Bicêtre and the Salpetrière, the curability of tubercles, that he has been led more and more to believe that the earthy concretions, which are almost always at the summit of the lung, are only modified tubercles; that they are generally accompanied by traces of cicatrization; that sometimes old cavities, lined with a new mucous membrane, co-exist along with them; and, lastly, that it is easy to find, even in the same lung, tubercles in different degrees of progress, which present all the phases of this secretion, from its origin to its earthy state, and frequently the same cyst contains both tu-

bercle and earthy matter. Such are the reasons which make him dissent from Rayer's theory, that the earthy concretions are the result of a depôt of purulent matter in the substance of the lung, and not a modification of tubercle.—*Ibid*, February, 1843.—*Amer. Journ. Med. Sci.*

Existence of Lymphatics in pseudo-membranes.—Mr. Hamilton was shown by Professor Vanderkelk of Utrecht, some preparations showing the existence of lymphatics in new and abnormal parts, such as the effusions and adventitious membranes which inflammation often leaves between the separate layers of serous membranes, and where beyond dispute, they must be newly-formed lymphatics in parts themselves new. "The first preparation," says Mr. H., "placed in my hand was of this nature. The pleura, on its sacral aspect, had been inflamed, had thrown out coagulable lymph, which, by a considerable bridle, connected it with a part of the diaphragm. The surface of this connection was not less than an inch or two in extent, and the bridle varied from a quarter of an inch to an inch in length. The lymphatics of these parts having been injected with quicksilver, the vessels of this system belonging to the lungs and pleura were very conspicuous; not less so those of the diaphragm; and thirdly, not less apparent than either, were distinct beaded lymphatics running along the effused membranes connecting the two normal tissues. As in this portion of the pleura, so it was equally conspicuous in another preparation—a case of lymph effused between the pleura costalis and pulmonalis, the bridle crossing like a regular bridge, and in this evidently adventitious membranous bridge were the lymphatics coursing their way as conspicuously as in the other parts."—*Lond. Med. Gaz.*, Jan. 6, 1843, from *Amer. Journ. Med. Sci.*

Abscess of the Brain.—In the *Archives Générales de Médecine*, a case of abscess of the right lobe of the brain is published, involving some interesting and important facts. A girl, a servant at a public-house, in a struggle with some drunkards, received a blow from a bottle on the lateral and upper part of the forehead, which caused a large and very contused wound exposing the bone. She was admitted into the hospital on the 9th of December, 1841, under the care of Blan-

din, and on the 13th of January, after the separation of several sequestra, the wound had cicatrised. The cure, however, was only apparent; a local pain remained, which increased in severity, causing the patient to scream loudly and prevented her moving her head. Vomiting and insomnia followed, but the intellect remained clear, and also all the other faculties. The pulse continued regular, but the patient gradually getting worse, and her general health evidently suffering much, Blandin, *en déséspoir de cause*, proceeded to trephine, thinking the irritation might be caused by a sequestrum or a purulent effusion. A piece of the cranium about an inch in diameter was accordingly removed, but no fracture was discovered; the parts beneath, however, presented an equivocal feeling of elasticity to the finger. Under these circumstances, Blandin determined to wait, in the hope that the abscess, if there was one, would open spontaneously, but after the lapse of some time, no such result ensuing, an exploratory puncture was made with care, but without any advantage. For a time, after these operations, the poor girl seemed to be relieved, but the pain soon became more severe, and emaciation and prostration, followed by a severe attack of erysipelas, ushered in death. The opening made in the cranium by the trephine had not closed, and the dura mater was intact. On passing in the finger after death, the same elastic feeling was perceived as during life, and on examination, it was found to correspond to a large circumscribed encysted abscess in the right lobe, separated from the dura mater by a thick layer of cerebral substance. It is clear that if Blandin had incised this layer, the abscess would have been discharged, and the patient had a chance for life.

Aran, the reporter of the case, in his remarks upon it, draws attention to the great neglect with which the trephine is now treated, and although far from an advocate for its general use, he equally condemns its total abandonment; he also thinks that in serious cases, such as that under notice, the surgeon not deriving benefit from the treatment, should not hesitate to plunge a narrow bladed bistoury into the brain itself, and to some depth if required.—*Prov. Med. Journ.*, Dec. 17, 1842.—*Amer. Journal.*

Local Treatment of Chancres by Sulphate of Copper and Cyanuret of Mercury. By Dr. Strohl.—The more rapidly primary syphilis is cured, the less likely are secondary symp-

toms to appear. The first object is most easily attained by cauterizing. Sometimes, however, this method is inapplicable; for instance, when the sore is very extensive, or much inflamed. In such cases, the author employs the sulphate of copper. The sores are dressed five or six times a day with charpie, which has been soaked in a solution of about a grain and a half of sulphate of copper to an ounce of water. Simple chancres, when thus treated, usually heal within twelve days. Dr. Strohl assures us, that he cures complicated chancres in an equally short time with an ointment composed of two grains of cyanuret of mercury to an ounce of axunge. This ointment is spread upon a piece of linen corresponding to the size of the sore. This dressing is apt to be painful at first; and it must occasionally be taken off, after it has been on for an hour or two, and the remedy must be applied in a weaker form. The pain is said to be most violent in half an hour or an hour, and frequently ceases entirely in two or three hours. When the chancre is extensive and painful, after the ointment has been on from four to ten hours, according to the sensibility of the patient, it is dressed with mercurial ointment, or opium cerate.

If the edges of the chancre have flattened, if the centre is cleaner, the pain less, and the suppuration healthy (which may occur after the first application of the cyanuret of mercury, but, at any rate, not later than the fourth), the treatment with the sulphate of copper is finished.—*Lond. Med. Gaz.*, Nov. 1842, from *Oesterr. Med. Wochenschrift.*

Nitrate of Silver in bed sores.—Mr. Henry Jackson, in a paper read before the Sheffield Medical Society, extolled the efficacy of the nitrate of silver for the cure of bed sores. He mentioned one case in which "all the known remedies had been tried without avail," and in which a solution of nitrate of silver ten grains to the ounce, applied by means of a camel-hair brush, over every part exhibiting the slightest appearance of inflammation, two or three times a day, until the skin became blackened, and afterwards occasionally, answered perfectly,—*Prov. Med. Journ.*. Dec. 31. 1842.—*Amer. Journ.*

The Indian Hemp.—Feb. 22.—Mr. Ley this evening communicated a paper on the *cannabis Indica*, from which it appears that, although the hemp is rejected from our official

preparations in England, it is, and has been for a long series of years, in constant use as a popular remedy throughout the East. It exhales a powerful narcotic odour, and the branches are gelatinous to the touch, with a resinous secretion, which is collected when the seed is found (as the plant is then in the greatest perfection), and is sold under the name of *churrus*, the shoots from which the resin has *not* been collected, are cut, dried, and sold as gunjah. Although hemp is no longer used medicinally in England, there is an old Act of Henry the Eighth yet in force, by which it is forbidden to be soaked in ponds or running streams where cattle drink. The older writers speak of it as a violent poison, and state that the water in which it has been soaked produces its effects almost as soon as drank. The resin of the cannabis Indica is in general use as an intoxicating agent from the furthermost confines of India to Algiers. If this resin be swallowed, almost invariably the inebriation is of the most cheerful kind, causing the person to sing and dance, to eat food with great relish, and to seek aphrodisiac enjoyment. The intoxication lasts about three hours, when sleep supervenes; it is not followed by nausea or sickness, nor by any symptoms, except slight giddiness, worth recording. These effects are much modified in this country, and much less marked, possibly from the length of the voyage rendering the article deteriorated in value. The subsequent effects are depression of spirits and relaxation of the muscles in a marked degree; the free perspiration on the skin, and the increase of appetite, have made some old rheumatic persons speak of it as the elasticity of youth.

Mr. Ley draws a comparison between the effects produced by opium and those caused by the cannabis Indica, the result of which induces him to give the preference to the latter, its influence being excited more kindly and more gratefully on the system. It has proved of service in cholera and rheumatism, but it is in spasmodic and convulsive diseases that it is most eminently useful. In tetanus it has been the means of cure in the majority of cases, both in men and horses, and it has much relieved the horrors of hydrophobia, although not averted the fatal termination. It is useful, also, in chorea, spasmodic asthma, and delirium tremens, and generally wherever opium is indicated. Mr. Ley considers from this that it will prove a direct antidote, the first of its class, to strychnia, one of the most violent poisons nature affords.

Medico-Botanical Society.—Lond. Lancet.

Cure of Glanders in Man.—A WAGONER, nineteen years of age, entered the Hopital de la Charite, in Paris, on the 18th of October, 1831. He complained of having felt ill for the week preceding, without being able to specify any particular seat of disease. Soon intense pains were felt in the ankle and knee-joints, and the muscles of the leg and thigh, though unattended with swelling or redness. His pulse became quick, thirst intense; headach and prostration. On the 25th of October pustules, filled with a purulent matter appeared on the instep and upper surface of the three smaller toes of the left foot. These pustules broke, and cicatrisation was completed in a few days; but a diffused swelling now made its appearance in the anterior part of the superior third of the thigh, followed by two similar tumours, one on each leg. Mouneret, under whose care the patient was placed, now suspected the nature of the disease, and ascertained that one of the horses kept in the stable where the patient had been sleeping actually had the glanders. For the eight months ensuing tumours of a similar kind to the foregoing were successively and incessantly appearing on all parts of the upper and lower extremities, though they continued one after another to disperse, and nothing in the general condition of the patient, except his emaciation, gave cause for alarm; yet one curious collateral circumstance is stated. Early in December, 1841, a horse being inoculated with the matter from one of the abscesses, died in the course of five days, without, however, presenting during life any of the ordinary symptoms, or after death any of the usual morbid appearances belonging to the disease.

The treatment of the patient was the same nearly throughout, consisting chiefly of decoction and extract of cinchona in large doses, with wine.

On the 5th of July, 1842, iodine with iodide of potassium was administered. This was followed by an attack of erysipelas in the left arm, and the iodine was suspended, to be resumed on the 17th. No new tumours had appeared during the previous two months; the cicatrisation of those still existing was soon afterwards completed, and the patient was discharged perfectly cured on the 31st of July.

Andral, and other able pathologists who saw this case, were unanimous in pronouncing it a true instance of glanders. The journal from which we have extracted the above relation says—"The case is unique. In all the instances of glanders in the human subject reported hitherto the disease has proved fatal."—*Gazette des Hôpitaux.—Lond. Lancet.*

Relative value of Quinine in large doses, as a remedy in Typhus.—The successful results of the practice of Sig. Broqua have been already noticed in the Lancet. But a commission appointed to examine into the correctness of a memoir addressed by Broqua to the French Academy of Medicine, reports that some of the cases cited in the memoir are not proved to have been of a veritably typhoid character, and in others no proof is adduced of the quinine administered having been the means of cure. The report of the commission (if not belied by the journal which informs us of its presentation) sarcastically enough remarks, that "one interesting fact confirmed by Sig. Broqua's memoir is the *harmlessness* (l'innocuite presque constante) *of the sulphate of quinine* in large doses;" and it recommends that the memoir should be *honorably* shelved! In the discussion that followed its reading, Piorry stated, that in typhus fever, with engorgement of the spleen, he had seen quinine prove serviceable, which had not been the case when the fever was unaccompanied with splenic lesion. Martin Solon, who had employed the remedy under the personal inspection of Sig. Broqua at the Hôpital Beaujon, admitted that in cases in which the fever assumed a remittant type quinine was useful, but that remittent typhus was rare—at least at Paris. "Of five severe cases of typhus fever, in which quinine had been given, death had resulted in three instances; and in the two others, recovery had only taken place after a considerable lapse of time, and without any evidence to show that the sulphate of quinine had been the means of hastening it. In the post-mortem examinations of the subjects who had died (says Martin Solon), I failed to detect any peculiar alteration that I could fairly attribute to the large doses of the sulphate; it had passed in a manner imperceptibly through the stomach and intestines. A symptom I observed in those who recovered from the disease was a remarkable depression of the circulation. In short, I consider the advantage attributed to the sulphate to be more than doubtful." Much doubt was afterwards expressed by several members of the academy as to the *innocuity* of large doses of quinia or its sulphate; but finally the terms of the report were adopted, and the memoir was shelved by a majority of voices.—*Gaz. des Hop.*—*Lond. Lancet.*

Amount of Respiration relatively to Sex and Age.—Bourgery, in a memoir read before the French Academy of Sci-

ences, asserts that, *cæteris paribus*, respiration is vigorous in proportion as the individual is younger and thinner. No condition is so productive of energetic respiration as youth. The respiration in a man of a given age is double the amount of that of a woman of the same age. At thirty years of age, the period of plenitude of the respiratory powers in both sexs, a man usually respires (*respiration forcee*) from half a gallon to a gallon (2.5 to 4.3 litres) of air (per minute); and a woman, from a quart to less than half a gallon in the same time. A boy of fifteen respires nearly half a gallon; and an old man of eighty, about three pints of air (1.35 litre). A strong man of thirty respires as much as two men of feeble constitution, boys of fifteen, or strong women; and four women of feeble constitution, boys of seven, or old men of eighty-five years of age. The respiration of a strong woman is accordingly equal to half the above amount, as estimated by Bourgery. According to the same authority, the faculty of respiration becomes impaired throughout life by successive ruptures of the air-cells, which inevitably attend all extensive respiratory efforts and other causes. Though these become more frequent as age advances, they occur likewise in infancy, and from the mere respiratory act. All diseases of the lung, however slight, tend also to incapacitate that organ.

Gaz. des Hop.—Lond. Lancet.

Quinine in Intermittent and Remittent Fevers. By S. S. Ransom, M. D., of Burlington, Iowa.—After several years' practice in the West, where intermittent and remittent fevers prevail, and after watching the medicinal operation of sulphate of quinine upon the system in these diseases, my former views in regard to its operation have become entirely changed. Heretofore I have regarded it as a powerful tonic, and admissible only where there was a perfect intermission (which is, I believe, the generally received opinion). I have, within the last three or four years, given it without regard to the intermission, remission or exacerbation, and with decidedly better success. A remittent very soon becomes intermittent under its use. We will take, for example, a case of *bilious remittent*, which is the most common form of fever in this Valley. After the bowels are thoroughly evacuated with mercurial cathartic, commence with one grain of the s. q. every hour, and it is rarely necessary to continue longer than thirty-six hours before there is a perfect intermission. Before

its use, the pulse was from 100 to 120; skin hot and dry; tongue dry; great thirst; violent pain in the head and back. After the system has been kept under its use for a few hours, all these violent symptoms entirely vanish, and a speedy convalescence ensues.

Now what is the medicinal operation of the sulphate quinine on the system? I know of no article in the whole materia medica which produces the same results. It has been accused of producing enlargements of the spleen. I have frequently known it reduce them, and I verily believe that it is among our most valuable remedies in chronic enlargement of that organ.

If you should consider this hasty communication of sufficient consequence, you are at liberty to give it a place in your valuable Journal, for the sole purpose, on my part, of eliciting some light—for it does appear to me that this very valuable article of our materia medica is but imperfectly understood. I would propose that some more able than myself in the profession communicate their views, and I may at some future day give a detailed account of the many cases where I have administered the article, and the results.—*Boston Med. and Surg. Journ.*

Remarkable Case of Congenital Small-pox.—A woman, twenty-four years of age, entered the Maternity Hospital in Paris to pass he first confinement. Labor commenced two days after her arrival; and after the lapse of fourteen hours (*jours*, says the original, but this is evidently an error) she was delivered of a female child. The face, scalp, and different parts of the child's body were covered by a pustular eruption, which was soon recognized to be veritable small-pox. The mother retained the marks of vaccination, and stated that she had never had the small-pox; nor during her pregnancy had she had connection with persons suffering under that disease, nor even heard of its prevalence in her neigborhood. Only, about eight or ten days before, she had gone to see a patient at La Pitié, near whom lay another patient in the small-pox. She had paid no attention to this circumstance till recalled to her recollection by minute inquiries. No untoward effects ensued, either to mother or child, and both left the hospital in perfect health soon afterwards—*Bulletin de l'Acad Royale.—Boston Med. Surg. Journ.*

Dropsy of the Os Uteri.—Under this name Jobert describes tumefaction of the mouth and neck of the uterus, which most frequently occurs among women of a lymphatic temperament, being, according to his observations, confined to those who have never borne a child, and who menstruate but feebly. Examined by the aid of the speculum, the os uteri is seen to be so much swollen as almost wholly to conceal the orifice, and it gives on pressure a sense of fluctuation. It is uniformly pale and flabby, and may sometimes be ulcerated, but it is not in general organically diseased. On carefully introducing a bougie through the orifice, a quantity of transparent, flocky, light-colored fluid usually escapes from the cavity of the uterus; and, at the same time, the neck and mouth become relieved of a portion of their tumefaction. This event may happen consequent on a spontaneous discharge of the fluid, and always attends more or less the recurrence of the menstral discharge. The cause of the affection has been attributed to a distension and superabundant secretion of the glandular follicles of the neck and mouth of uterus. For its treatment after the evacuation of the contents of the uterus, Jobert advises free incisions to be made in the os uteri, in the direction from centre to circumference (*dans le sens des commissures*). The granulation of the wounds thus made, produces concurrently, as he says, an enlargement of the orifice of the uterus, which effectually obviates a return of the disease.—*Lon. Lancet.*

THE WESTERN JOURNAL.

Vol. VII.—No. V.

LOUISVILLE, MAY 1, 1843.

TRAVELLING EDITORIALS.

It is no doubt known to most of our readers, that Pensacola Bay is a permanent Navy station, and the only one west of Cape Florida. Having for its object the protection of our commerce on the Gulf of Mexico, it is of special interest to the people of the valley of the Mississippi, and the little sisters—Pearl, Alabama, Escambia, Appalachicola, and Suwana, which enter the Gulf to the east of the great river. We shall not, then, apologize for making our visit to this station the occasion of an editorial; although it may embrace some things not strictly professional, and others with which many of our readers are already acquainted.

The Bay.

What is now called Pensacola Bay, was discovered, three hundred and four years ago, by one of the followers of De Soto, by whom, however, it was not visited. It was then, by the Indians who dwelt on its banks, called Achusi. Its width varies from one to six or eight miles, and its length is about thirty. Lying in the latest tertiary formation, its banks are composed of white and yellow sand.

The long leaved pine is the predominant tree of the forests which surround it, interrupted, here and there, by a cypress and titi (*andromeda*) swamp. The traveller may wander far and wide, without meeting with a more beautiful sheet of water than that on which we are now looking out, from the verandah of the Naval Hospital, in one of whose untenanted wards we lodged last night. Our latitude is a little above the thirtieth degree—our elevation thirty feet over the Bay.

Navy Yard.

This *depot* of munitions of war and naval supplies, is situated on Tartar point, which projects into the north side of the Bay, about three miles from the open Gulf. This point is a bed of white sand, elevated but a few feet above the waters of the Bay. It is said to be an exceedingly healthy spot. Of its buildings, it is not our purpose to speak. Its present commandant is Com. Lavalette; its surgeon Dr. W. A. Spottswood. The officers of the yard are changed every three years.

Forts.

Within sight of the yard, are three forts, two at the mouth of the Bay, on the approximate extremities of Foster's Island and Santa Rosa Island, which are but dunes of white sand, rising a few feet above the tide. The former is called Fort McCree, the latter Fort Pickens. The third, Barrancas, is situated on a higher bank, two miles up the Bay, on its north side. A part of the 7th Regiment of Infantry under the command of Lieut. Col. Whistler, and having Dr. Moore as surgeon, is stationed at these forts. Their object is the protection of the Navy Yard, and of vessels undergoing repair.

Hospital.

The site of this edifice, is between the Navy Yard and Fort Barrancas. The buildings stand on a second bank or higher terrace, twenty four feet above the level of the Bay, and are almost concealed by live-oaks, pines, and other evergreens; clumps and tufts of which partially obscure the white sand of the plain below. At the level of this plain, in front of the Hospital, several copious springs of soft water burst out, which form basins and then flow off to the Bay in perpetual currents. In the rear, and on each flank of the Hospital, is a plain of yellow sand, over-shadowed with

shrubs and trees of perpetual verdure; and are already, maugre a most inclement and tardy spring, in some degree enamelled with flowers.

The Hospital buildings consist of two principal edifices, connected at their ends by a corridor; of a smaller one in the rear; and of houses for the surgeon and assistant surgeon, in a line with the central structures. Each of these is a parallelogram, surrounded by a broad and high verandah or porch, with an elevated basement. The wards for seamen consist of transverse sections, each sufficient to receive from eight to ten patients; and are admirably ventilated by means of opposite windows. The edifice appropriated to sick officers and midshipmen, has an entry through its centre, with small rooms on each side, which cannot be as well ventilated as the seamen's wards. This entry is too narrow, which results from the inordinate width of the porticos. In fact, the parallelograms might have been made several feet wider, without approaching too near the surrounding colonnades; whereby their capacity would have been much increased at a very small expense. At present there are but nine patients in the establishment. It can accommodate 120, and has been filled to overflowing; which is likely to be the case whenever ships of war arrive infected with yellow fever. Indeed, experience has shown that this is little else than a Yellow Fever Hospital. When the disease of a seaman assumes an exceedingly chronic form, and he is not very ill, or when he has become permanently infirm, he is sent round to the Naval Asylum near Philadelphia. The term of service at the hospital is three years. The present surgeon is the amiable and intelligent Doctor Isaac Hulse, who was present at the founding of the hospital in 1824, and, from requiring, through constitutional infirmity, a warm climate, has been sent here oftener than all the other surgeons of the Navy. At present he has no assistant. Like the other surgeons of the Navy he is allowed to engage in private practice, and is often called to Pensacola, eight miles up the Bay, where he is greatly esteemed for his skill and urbanity.

Navy Surgeons.

As many of our young readers may aspire to places in the Navy, we proceed to say something for their benefit. At present there are 69 surgeons, 60 assistants, and 9 passed assistants. The last are those who stand ready for promotion. To obtain admission into the

Navy, the applicant must first be a graduate, and then undergo a successful examination by a board of surgeons. It often happens that the candidate is rejected! If this occurred still oftener, it would be still better. In private life, people may choose for themselves, and so great is the popular propensity to patronize quacks and dunces, that if thoroughly educated graduates were always offered, they would perhaps be rejected. The Government, however, owes it to our brave and patriotic seamen and officers, exposed to all climates and casualties, to provide for them competent physicians and surgeons. It is due, also, to the character of the nation that it should send out such as will bear a favorable comparison with the surgeons of France and England, who, in times of peace, are frequently brought into communication with ours. As long, then, as our medical schools (without a single exception) maintain their present degraded and contemptible standards of medical attainment, their short sessions, and superficial teachings, it is absolutely necessary to have a naval board of examination—to turn back to the horn-books of the profession, one-third of all who apply. Not having been among this number, the candidate receives a certificate, when he may, if a vacancy exist, obtain an appointment from the Secretary of the Navy. But let him be aware that he is only admitted to probation. At the end of five years, he is subjected to a second and still severer ordeal, the great object of which is, to discover what his improvement has been since the former—whether he has been observing and studious, is a growing professional man, and promises to become eminent—if so, he is made a passed assistant, and ready in due time to become a surgeon. Thus, our young friends will see it is no child's play to get into the Navy—with whatever facility they may have crept into the profession, or may creep into professorships.

Let us now inquire into the motives and advantages of a Navy appointment. A naval surgeon is exposed to the dangers of all climates and localities, and necessarily separated, for long periods, from his friends and family; but, on the other hand, he has diversified opportunities of improvement, pleasant companions, and exemption from the caprices and delinquencies which so often annoy or disappoint him in private practice, and derives importance and dignity from his official rank. But all this—

"Plays round the head, but comes not to the heart."

The great American question is, which career will fetch in most money? As data for an answer to this momentous inquiry, we shall extract from the Naval Register of our friend Hulse, the following statement of the pay of surgeons and assistants, in 1842.

"Assistant surgeons, waiting orders, $650 *per annum*—at sea $950. Passed Assistants, waiting, $850—at sea $1200—when stationed at a navy yard, hospital, rendezvous, or receiving ship, $950. Surgeons, for the first five years after being commissioned, $1000; for the second five years $1200; for the third $1400; for the fourth $1600; after the 25th year $1800. All surgeons under orders for duty at navy yards, hospitals, or receiving ships, to have an increase of one-fourth of the above amounts; if ordered to sea, of one-third; and if sent out as fleet surgeons, one-half. The Chief of the *Bureau of Medicine and Surgery*, at Washington, has a salary of $2500." From an examination of this table, we incline to the opinion, that if they were all in actual service, the 138 medical gentlemen of the navy, would receive as much as a corresponding number of physicians, taken indiscriminately in any part of the United States out of our largest cities; but it must be admitted that there are many in the navy, who could earn more in private practice.

Navy Ration.

Having got out of port and fairly under weigh, we shall not cast anchor till we have sailed a little further. We suppose that most of our backwoods' readers have not had an opportunity of knowing on what our seamen subsist, and we will, therefore, proceed to tell them.

The *daily* allowance of each person is—"One pound of salted pork, with half a pound of peas or beans; or one pound of salted beef, with half a pound of flour, and a quarter of a pound of raisins, dried apples, or other dried fruits; or one pound of salted beef with half a pound of rice, two ounces of butter, and two ounces of cheese, together with fourteen ounces of biscuit, one-quarter of an ounce of tea, or one ounce of coffee, or one ounce of cocoa; two ounces of sugar and one gill of spirits; and a *weekly* allowance of half a pound of pickles or cranberries, half a pint of molasses, and half a pint of vinegar."

"Fresh meat may be substituted for salt beef or pork, and vegetables or saur kraut, for other articles usually issued with the salted meats; allowing one and a quarter pounds of fresh meat for one pound of salted beef or pork, and regulating the quantity of vegetables or saur kraut, so as to equal the value of those articles for which they may be substituted."

"Should it be necessary to vary the above daily allowance, it shall be lawful to substitute one pound of soft bread, or one pound of flour, or half a pound of rice, for fourteen ounces of biscuit; half a pint of wine for a gill of spirits; half a pound of rice for half a pint of peas or beans; half a pint of peas or beans for half a pound of rice,"

No officer or midshipman, nor seaman under 21 years of age, is allowed to draw the spirit part of the ration; and any one may commute it for money.

It must be admitted, that we have travelled over a substantial bill of fare; and that our seamen are better fed than many of their brothers on shore. The diversity in their diet is highly commendable, and may be regarded as a main reason why they are so seldom affected with scurvy.

Waste of Hospital Liquors.

In the office of the Hospital where we are writing, we find conspicuously pasted against the wall, a circular from Dr. W. P. C. Barton, Chief of the Bureau of Medicine and Surgery, in which he sets forth, that great abuses have existed in the care and use of the liquors provided for the sick; that they have been considered by the officers as a store from which all might borrow, and that payment was generally omitted; that they have been wasted on the well, or on those who did not need them; that it will hereafter be considered a misdemeanor to lend even a glass of wine; and that he believes the necessity of liquors in the treatment of the sick is greatly overrated. It was not without a feeling of mortification that we read an official statement, from such high authority, which presents our naval officers under such a discreditable aspect, and we fervently hope the Chief of the Bureau may be successful in reforming the abuse he has made known to the world.

Assault on the Temperance Reform.

The circular from which we have just quoted, concludes as follows:

"Although the undersigned has not been able to perceive anything but future fatal reaction from the high handed ultra temperance cause so injudiciously, as he believes, expanded beyond its first design, and of course belongs to no temperance society, still the rational community is not entirely swallowed up in the mad vortex. Hence the moral aspect of the subject, in unison as it is with the popular feeling of the judicious temperance advocates of the present world, does not take any thing from the merits of a necessary reform."

Now we cannot but deeply regret that the Chief of the Bureau at Washington, should have so far stepped out of the path of official duty, as to put forth this denunciation.

What is it, we would ask, that led to the causes he has so vividly depicted, but an overweening love of drink, prompting to an unscrupulous seizure even of all provided for the sick? And what so likely to correct the evil, as to render drinking unfashionable and odious? Why has the government abolished the army ration of spirits, and reduced that of the navy one-half, if drinking is *necessary?* If not necessary for soldiers, why is it necessary for people in private life? If soldiers are not allowed alcoholic drinks, nor suttlers allowed to sell them, the army, in theory, is a *total abstinence* temperance society; but according to Dr. Barton, this is fanatical, and if so, the spirit ration ought to be restored. Does he not know that total abstinence is the best method of moderating the desire for drink; and that the "gill a day" for the navy is a means of keeping alive the propensity? He tells us, that the "*rational* community is not *entirely* swallowed up in the mad vortex." This is true. There are a *few* rational friends of temperance who have not been drawn into it, but the number is very small. The "mad vortex" has spread itself over the whole country; and is not likely to contract, notwithstanding the Doctor sees nothing ahead but "future fatal reaction." He deprecates the "high handed" proceedings of the friends of temperance! But what are they? Is it a "high hand ed" proceeding, for a man to resolve and declare that he will not again lift the intoxicating bowl as high as his mouth? Is it "high handed" for a man to decline drink, when it is offered to him? Is it "high handed" to neglect to ask others to drink? Is it "high handed" to persuade our officers and seamen not to rob the sick of the wine provided for their relief? Is it "high handed" for a phy-

sician to tell the people, of whom he is the medical adviser, that they would have better health if they did not drink at all? Is it "high handed" for us to ask the Doctor, whether every seaman and officer of the navy would not have firmer health, greater strength and activity, a milder temper, and a more willing heart, if he should never again taste a beverage more stimulating than tea and coffee? Is it "high handed" for benevolent men to address the intemperate, and implore them not to lay waste their habitations and beggar their wives and children? If it be, then the friends of the temperance reform *are*, indeed, "high handed;" and we trust will continue so forever. D.

Navy Hospital, Pensacola Bay,
March 30th, 1843.